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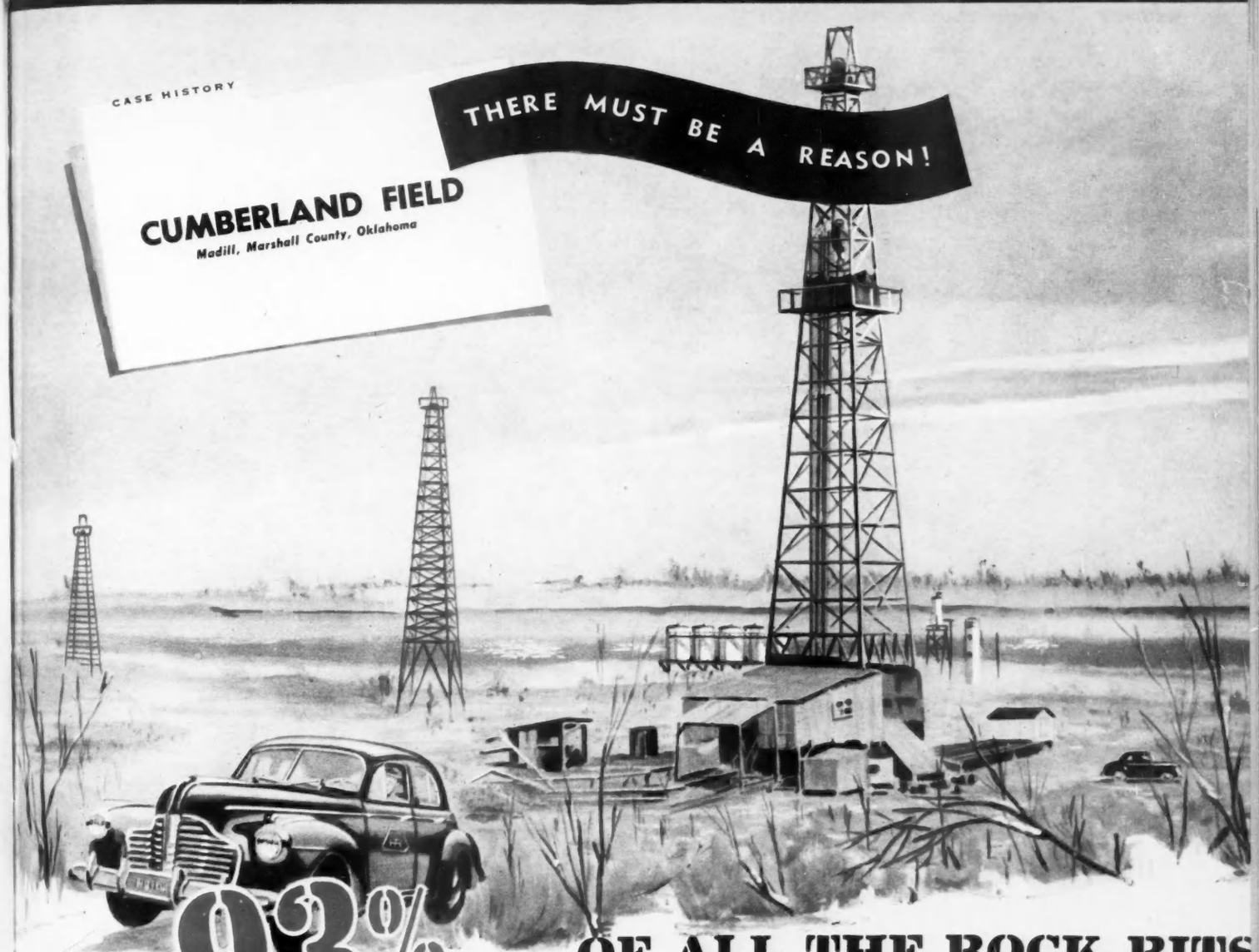
MAR 2 8 1946 INDEX PAGE 19

The OIL WEEKLY

FOR THE DRILLING, PRODUCING, PIPE LINE INDUSTRY



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The OIL WEEKLY

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LOOKING AHEAD
. . . with the Editor

THE continent of Antarctica, as large as the United States and Mexico combined, is potentially a future source of petroleum, coal, and other minerals, and the U. S. government should immediately take steps toward securing such resources as U. S. reserves. This is the urgent recommendation of Dr. F. Alton Wade, an able geologist who has participated in two expeditions to the South Pole regions and who is further qualified on the subject through experience on the Ice Cap of Greenland.

OIL IN ANTARCTICA!

This plea for immediate, systematic U. S. exploration in the Antarctic regions is embodied in an exclusive, original, and authoritative article scheduled in the next issue of THE OIL WEEKLY, the monthly International Feature Issue of April 1.

On the basis of first-hand and other information on geological conditions in Antarctica, Dr. Wade says there are good reasons to assume that oil exists in some of the Antarctic formations. He recognizes the problems that would be involved in development work, but believes American ingenuity could solve them, following further systematic, large-scale, preparatory exploration. We cannot afford to miss today's opportunity of securing these important potential reserves for the U. S., he declares.

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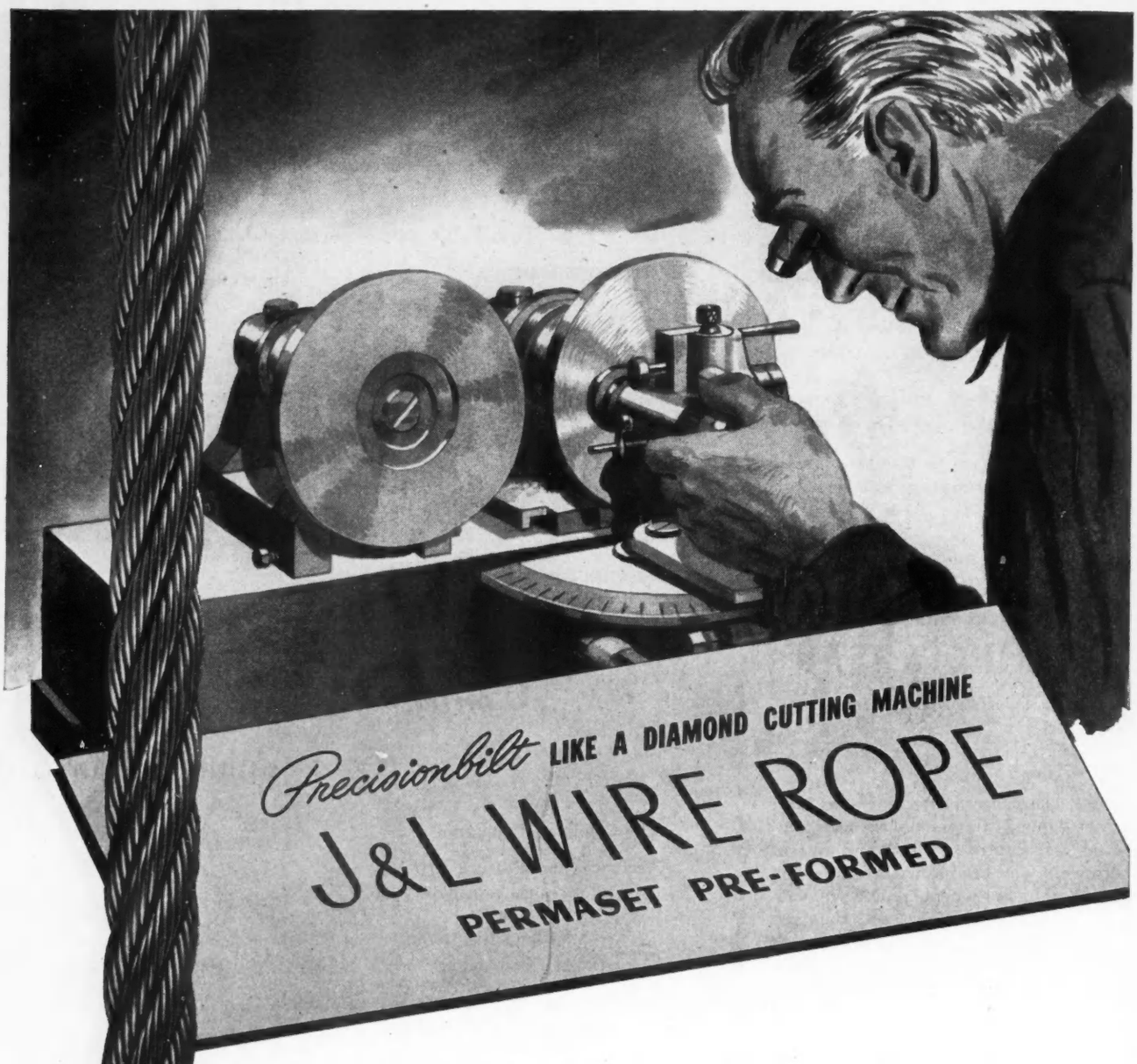

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Cost of Developing Atomic Power Plant

ANOTHER discussion of the future of atomic power always is in order. It's like a bus in Mexico City where, it seems, there is always room for one more.

This time Arthur H. Compton, chancellor of Washington University, is the speaker and his opinion is that there is a very definite possibility that atomic energy some day may be used to supply heat and power to cities and large industrial plants. But he, like E. R. Gilliland of Massachusetts Institute of Technology (THE OIL WEEKLY, March 4) rules out the likelihood of future automobiles being driven by "pills" of atomic energy.

Compton cites these advantages of atomic power: extraordinary low rate of fuel consumption and consequent low cost of fuel; wide flexibility and easy control of the rate at which power is developed and the complete absence at the power plant of smoke or noxious fumes.

"If one must charge against the capital cost what is spent in research and development, this cost is very high indeed," he said. "If however, one looks down the line to a billion-dollar-a-year national industry based on atomic power, the nation can afford a considerable investment in the research and development required to bring this industry into being."

Discussing the effects on health of the operating personnel, Compton cited the possibility of damage from ionizing rays emitted by the plant itself and by all materials which are taken out of the plant.

"This is the problem of the health of radium and X-ray workers on a grand scale," he recently told a forum of scientists and engineers employed by companies affiliated with Standard Oil Company (New Jersey). "That the problem can be solved is shown by the fact that in all of the operations of the existing half-dozen or more such plants, some of which have been working for years, not a single serious exposure has occurred. Thorough inspection and vigilant care given by a competent health staff explains this."

A Senate investigating committee recently disclosed that there are 1,700,000 square miles of potential oil-producing territory in the United States, of which less than 10,000 square miles are being exploited. And the first oil well in tthe United States was completed in 1859!

—Lion Oil *News*, February

Aid to Russia and Its Current Payoff

"STEEL in War" lists some of the American-made items which went to Russia under lend-lease as follows:

A total of 455,400 motor vehicles—trucks, armored scout cars, jeeps and motorcycles.

Military planes, 14,500.

Locomotives, 1500; freight cars, 10,900; rails, 546,000 tons and railroad wheels and axles, 116,000 tons.

Actual war equipment included: 8200 anti-aircraft guns, 135,000 submachine guns, 105 submarine chasers, 7600 diesel engines, 343,000 tons of explosives and 47,700,000 square feet of airplane landing mats.

All of which seems not to mean a thing insofar as current Anglo-Russian relations are concerned. We and Great Britain seem to have accepted without much question the early postwar expansion of Russia. Now it appears difficult to check. Their load of American-made lend-lease materiel has strengthened their position in continuing to "run a bluff," if bluff it is.

With an estimated cost of 5.7 million dollars for well logging, the total outlay for geophysical oil work in 1945 is estimated at 55.2 million dollars.

—"Geophysics," *Mining and Metallurgy*, February

Public Relations Improvement Needed

IN THE light of present developments, management—including, certainly, that of the oil industry—would do well to concentrate on a more aggressive public relations job during 1946. Intelligent application of public relations has proved itself profitable in terms of time, money and goodwill, but the real job is yet to be done. Now as never before, it is necessary for management to emphasize the philosophy which dictates that business has a social and public responsibility, as well as an economic obligation to discharge.

This conception of modern business is not too well grounded in the public mind, nor is it accepted by many of our top educational institutions. Ask any senior from our universities what he thinks about corporations and you will probably be disappointed at his answer. Somehow the notion persists that something evil is tied up in corporate power and propagandists always make the most of this hang-over from the days when all companies were thought to be the "robber-baron" type.

Management should realize that proper public relations is the keystone of successful business and should continuously promote the philosophy of modern business.

Employe and community planning, employe training, suggestion systems, house organs, plant-city advertising are a few of the public relations techniques that will help close the gap between management, employes and the community. More attention should be paid to them.

Under no circumstances should the American synthetic rubber industry be viewed as a white elephant on the hands of the taxpayers. First of all, it enabled us to avoid military disaster. In that respect, its value has transcended any possible financial calculation.

—P. W. LITCHFIELD, The Goodyear Tire & Rubber Company

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The Week's News

OIL prices was a topflight subject last week. In Washington industry representatives urged a House committee to order immediate release from price control while other oil men were meeting with OPA officials to discuss the increased crude ceiling which will become effective March 29. See below and also page 28.

Before O'Mahoney Committee—Still others told the Senate Special Petroleum Committee that price is one of the major problems confronting the independent operator, whose difficulties were the subject of lengthy hearings. Another potential threat is the increasing importation of oil, which in January hit a new all-time high. See below.

Synthetic Rubber Prospects—Permanent operation of facilities to produce 250,000 tons annually of synthetic rubber from petroleum as a hedge against this nation ever again being cut off from its supply of natural crude was recommended in a report by the Inter-Agency Rubber Policy Committee. Page 30.

Krug Takes Over—Taking office as Secretary of the Interior, Julius A. Krug promised a fair deal to the oil industry, insofar as the operations of his department are concerned, and an end to "grandstand" performances. Page 26.

Land Leasing Changes—The Interior and Agriculture department made known their views on legislation to revise the Leasing Act of 1920, the former agreeable to some changes and the latter insisting transfer to Interior of public lands under its jurisdiction would curtail revenue received therefrom. Page 29.

Iran and Russia—Iran oil was prominent in the news, with Senator Claude Pepper urging that Russia be given access to Iran reserves and the Iran government itself appealing to the United Nations Security Council, meeting today, to intervene. Russia had asked that the meeting be delayed. Page 31.

India-Burma Pipe Line—The government has sold the India-Burma pipe lines built during the war, receiving $1,376,000 as the salvage value of facilities costing $31,575,000. Page 29.

Surplus Disposal Flaws—Methods and procedure of handling disposal of surplus goods abroad rapped in Senate report which points out most favorable period for selling already is past. Page 27.

Texas Flared Gas—The Texas Railroad Commission seems intent on doing something about wastage of natural gas by flaring. Second hearing called. Page 31.

Gasoline from Gas Plant—Progress is being made on financing of proposed plant at Brownsville, Texas, where natural gas will be utilized. Page 27.

Price Relief Asked

Representatives of the oil field drilling and equipment manufacturers met last week with OPA officials to ask for raises in price ceilings to cover the increased cost of steel and labor.

With other industries using steel, the oil equipment manufacturers are affected by the $5 a ton increase given the steel producers to offset the increase in wages which ended the steel strike, as well as by their own increased labor costs.

Threat of Imports and Development Of Oil Co-ops Brought Out at Hearing

Price, imports, taxes, public-land regulations and farm cooperative competition, in the order named, are the outstanding problems confronting the independent oil operator, the Special Senate Petroleum Committee was told last week by representatives of the Independent Petroleum Association of America.

With the exception of price, it was pointed out, all of these are matters in which the Congress can assist the industry, since they are not the problems of the independents exclusively but affect the major companies as well.

No appeal for protection against any "big interest" was made but witnesses showed definitely that, relieved of the handicaps enumerated, they can live with the integrated companies with whom, it was pointed out, most of the independent producers deal in marketing their crude.

Operators had thought the question would not be deemed pertinent to the hearings, but the committee showed great interest in the farm cooperatives, to which B. A. Hardey, Shreveport independent producer and president of the IPAA, had referred.

Under questioning, Hardey said the co-ops have reached the point where they are in competition with the major companies, and was told by Chairman Joseph C. O'Mahoney that he had raised "one of the most important questions in the whole problem" of the survival of independents.

Interest In Co-ops

Hardey had no figures on co-op operations, but said they were buying producing properties at prices independent oil men could not refuse, and were acquiring refineries and other facilities.

O'Mahoney promised to go into the question further, and will call upon fed-

Oil Price Increase Schedule

Higher prices—a 10-cents per barrel increase—for domestic crude oil will go into effect March 29, it was announced last week.

Ceiling prices for residual fuel oils also will be raised at all levels of distribution throughout the United States, Hawaii, Puerto Rico and the Virgin Islands to encourage greater production for the Navy, War Shipping Administration and industrial users.

The increase will give refiners 21 cents a barrel more in all areas except Washington, Oregon, California, Nevada, Arizona and Hawaii, where it is limited to 15 cents a barrel.

In the same order, OPA extended indefinitely the half-cent a gallon increase on kerosine and distillate fuel oils, due to expire April 30 in the East Coast, Gulf Coast and Middle West areas and June 30 on the Pacific Coast, and extended the higher price to the Rocky Mountain states, making the increase nation-wide.

To maintain normal differentials in the industry, OPA also raised tractor fuel ceiling prices half a cent a gallon throughout the country except in the Pacific Coast area, where an increase previously was granted, and raised asphalt ceiling prices 21 cents a barrel in all areas except the Pacific Coast, where 15 cents a barrel is allowed.

The formal order covering the increased crude price is expected to be issued Tuesday or Wednesday.

OPA officials said there had been no "hold up" in issuance of the order, explaining that it was necessary to have a number of meetings with the crude oil, refinery and various other industry advisory committee's to work out details. Normally, it was said, formal orders are issued only two or three days in advance of their effective date.

Industry sentiment on the increase still appeared to be dominantly adverse, with members of the crude committee insisting that it falls short by 25 cents a barrel of meeting the needs of the situation, and refiners protesting against being required to absorb any part of the increase even temporarily.

It was made clear that nothing short of complete abolition of price control would be entirely satisfactory.

eral agencies to provide pertinent data.

Major targets of the industry representatives were the government's import policy as exemplified in the State Department's authority to make new reciprocal trade agreements in which the already-halved import oil taxes could be further slashed; the Treasury's efforts to kill the percentage depletion allowance and require the capitalization of all well costs, and government competition from the Naval oil reserves, federal claim to tidelands, and the policy of retaining mineral rights in sales of government lands to private parties, and the excessive royalty payments required under federal oil and gas leases.

"Congress can do much to relieve our anxiety over these matters," O. C. Bailey, chairman of the Arkansas Oil and Gas Commission, said.

Stripper Well Problem

The committee paid considerable attention to the stripper well operator, hearing from H. M. McClure, president of the National Stripper Well Association and chairman of the Michigan state oil board, that 34,298,000 barrels of recoverable oil were left in the producing horizons underlying wells abandoned in 1944.

McClure warned that even if present subsidy payments were continued without any increase in the posted price there would be an acceleration in abandonments because of increased costs and uncertainty as to future economic conditions. With practically no limitation on imports and with flush and semi-flush production the crude price structure will be too low to prevent wholesale abandonments, he declared.

"It is contrary to sound conservation and detrimental both to our national defense and welfare to permit abandonment of these stripper wells when the price for oil is less than $2 to $2.25 per barrel, for the next cheapest source of crude oil supply is from oil shale from which oil cannot be made at less than $2.25 per barrel," he said.

McClure's association favors enactment of a law which would grant a fixed differential in price for stripper well production over and above the general market price, the differential to be paid by the government. Pennsylvania Grade Crude Oil Association, he added, favors legislation making permanent the present stripper well subsidy.

Secondary Recovery Role

Approaching the subject from the standpoint of secondary recovery, Don T. Andrus, immediate past president of Pennsylvania Grade Crude Oil Association and Interstate Oil Compact Commission representative said that much of the 100 million barrels which it is estimated will remain in the presently known 20 billion-barrel reserve after depletion of the primary reserve may be recovered by secondary-recovery methods.

Andrus pointed out that it is the "little men" of the industry who originated and developed the idea of secondary recovery and though that the work should be encouraged.

To that end, he recommended that the Bureau of Mines take the scientific leadership in cooperation with the industry and the states to develop better methods; that Congress should use the influence of the government to maintain a crude price which would allow the industry to obtain the maximum recovery, and, in view of the fact that crude prices are regulated by the law of supply and demand which in turn is determined largely by flush production, should enact a permanent conservation program providing for continuance of the subsidy.

Threat of Imports

A statement by Wirt Franklin of Ardmore, Okla., first president of the IPAA, that oil imports in 1945 averaged 311,000 barrels daily and reached a new all-time high in January of this year at 413,000 barrels riveted the attention of the industry on what may shortly become the most serious threat to independent operators.

Franklin explained that in 1932, when imports averaged 300,000 barrels daily, Congress imposed the import excise taxes and receipts immediately dropped to a little over 100,000 barrels daily, gradually rising to 162,000 barrels daily in 1940 and 266,000 barrels in 1941, being reduced to 99,000 barrels daily the following year because of the war. In January, 1943, quotas were removed under the new agreement with Mexico, and imports immediately started upward, to 174,000 barrels daily in 1943 and 252,000 barrels in 1944.

Relating the history of the independents' fight against unrestricted imports, Franklin was skeptical of any success in the current effort to have a meeting of all interests with the committee for reciprocity prior to any consideration of futher cuts in the oil taxes in new agreements. Committee Chairman O'Mahoney agreed with him, stating that he had found it "futile" to make representations to the committee on behalf of industries in his state because of its "closed door" method of arriving at decisions.

Franklin declared that the same arguments as in the past are being advanced as a reason for opening the door to imports—that we are running out of oil and that trade with foreign nations should be encouraged, and pointed out that there are more than a million square miles of area in this country as yet unexplored for oil.

Pointing out the advantages of producing in foreign countries—large per well output, low paid labor, low taxes and cheap transportation—Franklin warned that "the domestic industry cannot compete on even terms with large volume foreign production."

He recommended that Congress review and approve all trade treaties before they become effective and that the quota system be revived and a tariff or excise tax be placed on foreign oil to remove the cost advantage.

"The domestic oil industry should be given the first opportunity to supply the petroleum needs of the United States," he insisted.

Stripper Subsidy Debate

The hearing wound up with a debate over a permanent stripper-well subsidy from which it was evident that the industry as a whole never would reach a unanimous agreement.

The subject was touched off by J. L. Sandifer, Jr., Breckenridge, Texas, who declared that posted price has never been such as to allow secondary-recovery operations.

Sandifer argued that the subsidy would be comparable with the government's expenditures on air mail to develop the aviation industry, on soil conservation, inland waterways, etc.

The two major objections which are held by some groups in the industry were advanced by A. Jacobsen of Amerada Oil Company, who declared a subsidy is nothing more than federal price fixing and puts a permium on inefficiency by giving an operator a better price for low production than he would get if, by a heavy investment, he increased his output above subsidized production.

Jacobsen also asked the committee to get statistics showing percentages of stripper wells owned by large companies and independents, pointing out that one group alone could not be subsidized and emphasizing that a subsidy would have to be for stripper wells and not merely for operators.

For National Security

In an attempt to put the matter on a firm base, Charles F. Roeser explained that 25 percent of our known reserves are involved, and the recovery of a maximum of that 5 billion barrels of oil is a matter of national security—a question of conserving oil rather than of insuring profits.

A posted price of $2.25 would get out most of the reserves, it was suggested by

Krug's Pledge

A fair deal for the oil and other industries affected by Interior Department activities was promised last week by new Secretary Julius A. Krug as the oath of office was administered.

Operation of the department as a "going concern" through the teamwork of its various bureaus without "grandstand performance" and the discharge, delegation or re-distribution of its activities and functions to produce the best results for the people of the country, uninfluenced by considerations of "prestige," were promised.

"I shall seek to carry out the diversified function by encouraging the participation of individuals and private corporations in the development of the country," he said.

"Government action will be resorted to only when public purposes can not otherwise be accomplished, but in such cases the department will carry out the mandates of the congress without fear or compromise with private interests seeking to obstruct necessary action."

Oscar L. Chapman, assistant secretary under Ickes was named undersecretary, succeeding Abe Fortas, resigned.

B. L. Majewski of Deep Rock Oil Corporation, but other operators suggested that a price of $1.80 to $1.90 per barrel would be adequate. Generally, it was agreed that the threat of substitutes would serve to limit the level to which oil prices could rise, and some producers saw an increase of no more than 35 to 50 cents a barrel when OPA controls are lifted.

Need for a differential in favor of the stripper-well operator was not challenged, but it was held that if such a differential is provided it would have to be paid by the government, since the refiners could not compete if they had to pay a higher price for stripper oil.

Sees Rapid Adjustment Once OPA Top Removed

The oil industry will rapidly readjust itself when the OPA ceiling on petroleum products is removed, W. S. S. Rodgers, chairman of the board of The Texas Company, said in Tulsa last week.

The increase of 10 cents is inadequate, and refiners must have an increase on products to compensate for the increase on crude," he declared. Refiners also face increased cost of labor, materials and supplies and they cannot pay 10 cents additional for crude and not get it back from products.

"The oil industry is very much out of adjustment since the close of the war, especially as to demands for residual fuel oil and middle distillates. When the OPA top is removed the industry will rapidly readjust itself."

Markets Reflect Evils Of Obsolete Oil Prices

In evidence that recent OPA ceiling increases on fuel oils were badly needed, actual quotations have promptly moved up to the new ceilings in most marketing areas. The prevailing strong demand, which has resulted inevitably from the shortages caused by inadequate prices heretofore, apparently will not be fully met even at the newly authorized prices. Some marketers still are unable to find adequate supply.

As further evidence that OPA has not solved the problems of supply that its policies have created, there is continuing maladjustment of supply to demand for gasoline. In several refining districts, individual refiners and markets have made further downward revisions in quotations on gasoline, due to surplus supplies.

Under proper pricing since the end of the war, some of the crude which has gone into the manufacture of surplus gasoline would have gone instead into the making of fuel oils which are now in serious shortage.

API Directors

Directors of the American Petroleum Institute will meet in Fort Worth Tuesday May 28-29 and according to the New York office "expectations are for a large attendance."

Headquarters will be at the Blackstone Hotel.

Financing for Gasoline Plant in Texas Outlined

United Gas Corporation, one of eight interests comprising Carthage Hydrocol, Inc., which is developing plans to establish near Brownsville, Texas, a $14 million synthetic gasoline plant, has been granted permission by SEC to buy $1,007,500 of Hydrocol's stock and notes.

Each of the eight companies connected with the project is scheduled to invest $1 million and the balance, under the financial plan will be borrowed by Hydrocol from RFC. The companies are The Texas Company, La Gloria Corporation, The Chicago Corporation, United Gas Corporation, Forest Oil Company, Niagra Shares Corporation, Gulf States Oil Company and Stone and Webster, Inc. The process was developed by Hydrocarbon Research, Inc.

The plant in the Brownsville area will process 60 million cubic feet daily of natural gas to produce 5800 barrels of high-octane (80 or better) gasoline and 1200 barrels of diesel oil daily. Crude alcohols, used in paint and photo industries, should be produced at the rate of 200,000 pounds a day, it is claimed.

La Gloria Corporation will supply one half of the gas required and Gulf States Oil Company the other half.

THE OIL MAN'S CALENDAR

APRIL	
1- 2	Society of Exploration Geophysicists, Annual Meeting, Chicago, Stevens Hotel.
2	FPC Gas Hearing, Charleston, W. Va., State Capitol.
2- 4	American Association Petroleum Geologists, Annual Meeting, Chicago, Stevens Hotel.
8-10	Mid-West Gas Association, Annual Convention, St. Paul, Minn., St. Paul Hotel.
11-12	Pacific Coast District, Production Division API, Spring Meeting, Los Angeles, Biltmore Hotel.
11-13	Interstate Oil Compact Commission, Quarterly Meeting, Tulsa, Hotel Tulsa.
12	Oil Producers Agency of California, Los Angeles, Biltmore Hotel.
17-19	Natural Gasoline Association of America, Annual Convention, Dallas, Baker Hotel.
18-19	National Petroleum Association, Semi-annual Meeting, Cleveland, Ohio, Hotel Cleveland.
29-30	And May 1, Independent Petroleum Association of America, Mid-Year Meeting, Houston, Rice Hotel.
MAY	
7- 8	American Gas Association, Natural Gas Dept., Cincinnati, Hotel Gibson.
7- 9	National Association Corrosion Engineers, Kansas City, Missouri, President Hotel.
17-18	Southwestern District, Production Division, API, Spring Meeting, Shreveport, La., Washington-Youree Hotel.
23-25	National Oil Scouts and Landmen's Association, Annual Convention, Jackson Mississippi, Hotel Heidelberg.
28-29	American Petroleum Institute, Directors' Meeting, Fort Worth, Blackstone Hotel.
JUNE	
6- 7	Mid-Continent District, Production Division, API, Spring Meeting, Oklahoma City, Skirvin Hotel.
7- 8	Kentucky Oil & Gas Association, Lexington, Ky., Hotel Lafayette.
13-14	Eastern District, Production Division API, Spring Meeting, Pittsburgh, Pa., William Penn Hotel.
27-28	Pennsylvania Grade Crude Oil Association Annual Meeting, Pittsburgh, William Penn Hotel.
OCT.	
7-12	American Gas Association, Annual Convention, Arlantic City, N. J.
16-18	Texas Mid-Continent Oil and Gas Association, Houston, Rice Hotel.
NOV.	
11-14	American Petroleum Institute Annual Meeting, Chicago, Stevens Hotel.

Committee Raps Disposal Of Surplus Goods Abroad

Lend-lease supplies turned over to Britain by "bulk sale" for the negotiated sum of $650 million, to be paid in connection with the repayment of the proposed $3750 million loan, was figured last week by the Senate National Defense Committee to have cost the United States in excess of $5 million and to include military and civilian petroleum costing $143,340,000, including ocean freight.

The figures were incorporated in a report which criticized methods followed in disposing of surplus property abroad, particularly that return of civilian-type surpluses abroad, needed in our civilian economy for reconversion, have been slighted. Petroleum products were not specifically mentioned.

The report held that none of the basic problems in disposal of surplus assets abroad has been solved; scarcity of dollars, the cost and difficulty of warehousing, restrictions on sales imposed by foreign governments have proved obstacles that our officials have been unable to overcome.

Bulk sale to the United Kingdom was a far poorer bargain for the United States than the bulk sale to France after the last war, the committee declared.

The report criticized the State Department for failing to create favorable conditions for the sale of foreign surpluses or to resist effectively the imposition of onerous restrictions imposed by foreign governments, and rebuked the Army and Navy for slowness in inventorying supplies and declaring surpluses.

The most favorable period for selling surplus property is already past the report commented.

API Agricultural Group Headed by George Krieger

George Krieger, Ethyl Corporation, New York, has been named chairman of the Agricultural Development Committee of the American Petroleum Institute. Members are: O. C. Bridgeman, Phillips Petroleum Company, Bartlesville, Okla.; Charles M. Byers, Standard Oil Company (New Jersey), New York; A. B. Culbertson, Shell Oil Company, New York; N. B. Curtice, The Pure Oil Company, Minneapolis; J. C. Dean, Socony-Vacuum Oil Company, New York; Philip D. Denton, Sinclair Refining Company, New York; Lloyd H. Geil, Standard Oil Company (Indiana), Chicago; K. G. MacKenzie, The Texas Company, New York; G. L. Mateer, Petroleum Advisers, Inc., New York; C. F. Ramey, Standard Oil Company of California, San Francisco, and T. J. Sullivan, Gulf Oil Corporation, Pittsburgh.

Continuance of Price Control Best Way to Perpetuate OPA, Group Told

Warning that continuance of price control is the surest way to perpetuate the Office of Price Administration, representatives of all interests in the oil industry last week urged the House Banking and Currency Committee to order the immediate lifting of petroleum price regulation in extending the Price Control Act.

Major and independents joined in the appeal, declared that the kerosine and burning oils shortages of the past winter were directly attributable to the lack of an adequate price under OPA's outdated price structure.

Witnesses appearing before the committee handed OPA brickbats instead of bouquets, J. Howard Pew, president of Sun Oil Company, declaring "price controls have retarded production, increased the deficit of needed goods and if continued, will perpetuate scarcities and shortages, thus encouraging inflation and reducing the purchasing power of the consumer's money."

Industry spokesmen emphasized that there is no shortage of crude to meet any foreseeable demand, there is a surplus of refining capacity and adequate transportation system, and no material advance of prices will follow removal of

Also see Price Decontrol discussion on page 32.

OPA controls because of those conditions and the highly competitive nature of the industry.

Pew declared that price controls never can be administered with fairness, and warned the committee that in peacetime they cannot be made to work without support by other and increasingly severe controls.

"All of this OPA talk about industry-promoted scarcities is bunk," he said bluntly. "The life-blood of industry is abundant production and nothing would suit industry better than a peacetime level of production equal to that achieved in the war.

"If the existing OPA price control powers are continued for another year," he added, "the Price Administration will be back here next year pleading for extension of another year, using the same arguments they propound this year with this one exception: next year they will be able to plead a worse situation and a greater urgency, for continued price control meanwhile will make the problem worse."

Price controls are endangering the national security by discouraging wildcatting, the committee was told by Walter S. Hallanan, president of Plymouth Oil Company, who pointed out the country was able to fight two great wars at the same time because it had a 25 percent reserve capacity over ordinary needs. Vital reserve capacity must be maintained, he said, but can be kept only by the removal of restrictions that destroy incentive.

Hallanan declared that the stripper-well subsidy, hailed by OPA as the incentive for exploratory drilling, failed entirely of that purpose and OPA finally dropped that contention.

It was only after long continued effort that OPA consented to review the oil-price situation, from which it eventually came up with a 10-cent a barrel increase, "given at a time when the OPA was fighting for its continued existence" and "obviously pulled out of the air," he said.

Hallanan derided the administration's announcement that it might be possible to suspend oil price control within six months.

"The oil industry," he said, "insists that it is not interested in a mere suspension of price control, either now or at some uncertain date in the future. We are asking for our full freedom. We do not want the probationary and restricting hand of OPA on our shoulder. We want to be restored to our status as a highly competitive industry. We seek to conduct our business entirely unhampered by the restrictions which were imposed by Congress only as a war emergency. The war is behind us and we ask that restrictions born of that war also be placed behind us."

Because of the restrictions on price, the average margin of the refiner, out of which he must pay all his costs and try to make a profit, has been reduced from 54 cents a barrel for the 1935-41 average to 48 cents on March 1 of this year, it was testified by Dr. Robert E. Wilson, chairman of the board of Standard Oil Company (Indiana).

At the same time, Wilson said, continued adherence to present price controls is raising serious dislocations of supply and "pauperizing the refiner" to the extent that his ability to serve the public is being jeopardized.

No Artificial Oil Shortage Is Likely, Texan Declares

Reports that when government controls are removed the states would create an artificial shortage by cutting back allowables were denied by Colonel Ernest O. Thompson of the Texas Railroad Commission in a telegram last week to Representative Wright Patman.

Thompson, charging that the huge surpluses of gasoline and shortages of fuel and heating oils are due to OPA policy, told Patman "there need be no fear of state regulatory authorities reducing production allowables below consumptive demand," pointing out that under the law approving the Interstate Oil Compact the President is authorized to permit an increase in crude imports any time the state authorities refused to supply the needs.

"Naturally," Thompson said, "the oil producing states would never cut themselves out of the oil producing business by inviting imports."

Wilson explained that gasoline demand is lower than prewar, while demand for heating, industrial and diesel oils is above normal, largely as a result of naval demands. The industry foresaw this situation las fall, when OPA was asked to lift price control so that it might be dealt with.

Failure of OPA to act as warranted by conditions will result in larger price increases when controls are removed than would have been the case had the industry been liberated within a reasonable time after the end of the war, the committee was told by B. L. Majewski, vice president of Deep Rock Oil Corporation, speaking for the independents.

"It is always necessary to introduce larger immediate price increases when deficits in supply approach critical status than would have been necessary if OPA had allowed operations to be adjusted gradually," he explained. "The home owner and the farmer have paid more for kerosine and heating oils during the past three months than would have been the case had our industry been free to make small price adjustments when needed and foreseen by the industry immediately after V-J day.

Present policies of OPA with respect to the petroleum industry create deficits of particular products, introducing serious problems of supply essential for full industrial recovery, encouraging an unsound supply position of higher value products such as gasolines, so that currently established gasoline price ceilings are meaningless and are creating a gradual paralysis of an industry which meets every requirement of a surplus capacity industry throughout its entire operation," Majewski said.

Porter Concurs

Majewski's views were corraborated by Frank M. Porter, president of Mid-Continent Oil and Gas Association, who declared that if administration policy in regard to price controls, as announced immediately after V-J day, had been followed, the oil industry now would be completely adjusted to peacetime.

Porter recommended that if OPA is continued a policy of withdrawing control over individual industries when the appropriate industry advisory committees certify that conditions warrant it, be made mandatory. Were such a policy in operation, he said, there is no doubt that price controls would be promptly lifted from the oil industry.

Challenging OPA contention that it is seeking to prevent a duplication of conditions which followed World War I, Russell B. Brown, general counsel of Independent Petroleum Association of America held that the present situation is not comparable so far as oil is concerned, since there is no shortage such as existed in 1920. The present plentiful supply of crude will continue if price controls are removed, the committee was assured by B. A. Hardey, IPAA head.

Donald P. Oak, manager of Lynde, Walter and Farby, Tulsa, testified that problems of the secondary recovery and stripper well operators cannot be solved without an adequate crude price.

Interior and Agriculture Give Views On Proposed Federal Land Lease Bill

The Interior Department is agreeable to changes in the Leasing Act of 1920, providing the Hatch bill to that end is amended in important respects, but the Department of Agriculture is opposed to transfer to Interior of certain of the oil-bearing lands now under its jurisdiction, reports of the two departments to the Senate Public Lands Committee disclosed last week.

Acting Secretary of the Interior Oscar L. Chapman declared his department has no objection to repeal of the present 2560-acre limitation on any one producing structure, but recommended that the maximum of 7680 acres which now may be acquired by one lessee in any state be increased to 12,320 instead of 15,360 acres and that the proposed permission to operators to take options on leases for geological and geophysical prospecting purposes be restricted to 64,000 instead of the bill's 100,000 acres.

Against Flat Royalty Extension

Chapman also objected to extension of the flat 12½ percent royalty rate provided in 1942, declaring the need for such encouragement except in war is not justified. He opposes a proposed extension of the principle of unitization to parts of any single pool, field or area, pointing out that part unitization would not eliminate unnecessary competitive drilling, permit the application of conservation measures to problems of secondary recovery or the control of wells with excessive gas-oil ratios, or other major problems.

Provision abolishing the right of the secretary to fix a minimum value for oil for the purpose of computing royalty and requiring him to take the royalty oil in kind if he is not satisfied with the prevailing market value was particularly opposed.

Explains Views

"In several cases," Chapman explained, "the posted field price has been found to be lower than the price of oil of the same grade produced and marketed under comparable conditions. This posted field price is generally established by the major purchasers of oil in the field. In such cases, the lessees have been billed on account of royalty at a rate commensurate with the prevailing market price in the general area for oil of the same grade. In those cases, the purchasers of the oil were able to fix arbitrary prices. If the United States were required to take its royalty oil in those circumstances, the only likely purchaser would be the owner of the facilities for transportation from the field. There could therefore be no real competitive market for the royalty oil. It is inconceivable that the Government would recognize and pay tribute to a practice so inimical to its interests and to the interests of other royalty holders."

Chapman suggested provision permitting lessees to store in the public lands gas produced from oil leases which was not marketable under existing conditions, protecting the rights of lessees in developing deeper horizons than those to which his lease applies, and safeguarding lessees' rights in other ways.

Agriculture's Stand

Transfer to the Interior Department of lands acquired by the Department of Agriculture for important public objectives and services would be disadvantageous both to those objectives and to the Federal Treasury, it was asserted by Clinton P. Anderson.

Anderson declared that under the oil leases which his department has issued or is now considering, the Treasury received $1,553,315 against $5052 had the leases been handled by the Interior Department, because Agriculture obtained bonuses in unproved territory which Interior does not ask, and is not required to pay 52½ percent of those revenues into the reclamation fund, as is Interior.

The Department of Agriculture has 60 leases outstanding, 45 of them in Mississippi, and 22 under consideration, including seven in Florida and one in North Carolina. The acreage now under lease is 63,256, and an additional 36,238 acres are covered by pending applications.

Floyd Succeeds Knowlton As Phillips Foreign Head

D. R. Knowlton has resigned effective April 1 as manager of the foreign department of Phillips Petroleum Company and as executive vice president and member of the board of directors of the foreign subsidiaries. He has been with the company for 20 years, except for the 2½-year period he was with the Petroleum Administration for War in Washington, D. C. as national director of production. Knowlton plans to enter private business.

F. W. Floyd

F. W. Floyd, South American manager of the company, has been named manager of the foreign department, and elected executive vice president of the foreign subsidiaries of the Phillips Company. Floyd has been in active charge of the South American operations of the company with headquarters in Caracas, Venezuela for the past year where he will continue to reside. He has been engaged in the exploratory and production phases of the oil business for the past 25 years, the past seven of which have been spent in Venezuela.

India-Burma Pipe Line Finally Sold for Scrap

Sale of the India-Burma pipe lines, which cost the government $31,575,000 to build during the war, for $1,376,952 as scrap was announced March 21 by the Office of the Foreign Liquidation Commissioner in the State Department.

Brigadier General W. O. Reeder, field commissioner at New Delhi, India, explained that they had no commercial value, that neither the governments of India nor Burma or private commercial interests had indicated any intention of purchasing, and that severe deterioration of the pipe by electrolytic action had set in.

The Chittagong-Tinsukia and Budge Budge-Tinsukia (Bengal-Assam) pipe lines, in India, were sold to Allen-Berry Company, Ltd., for $1,271,032.52. The first section consists of 570 miles of 6-inch pipe, cost $4,785,418, has 22 pumping stations, 95 pumps and 83 storage tanks ranging from 10,500 to 420,000 gallons capacity. The Budge Budge line runs 750 miles, cost $5,838,738, has 32 pumping stations, 147 pumps and 58 storage tanks.

The Burma pipe line, comprising two sections, was sold to Indian Traders Corporation for $105,919.45. The first section cost $11,213,845, and consists of 296 miles of 6-inch steel pipe, 34 storage tanks, 15 pumping stations and 76 pumps. The second section comprises 874 miles of 4-inch, with 38 pumping stations, 83 storage tanks, and laundry, housing, administration and service buildings, costing $9,736,816.

Berea and Murrysville Sands Studies Are Shown

Possibilities of new production in the Berea and Murrysville sands in northeastern Ohio and western Pennsylvania are indicated by the results of a study incorporated in a new map issued last week, it is declared by officials of the U. S. Geological Survey.

The map is the fourth to be published as a result of continuing investigation of the Berea sand in the Appalachian basin, and is based on the study of the area east of the part of northern Ohio shown in Preliminary Map 39 of the Oil and Gas Investigation series.

Issued as Preliminary Map 49 of that series, copies may be purchased at 60 cents each from the survey offices in Washington.

TGT Hearing April 8

Federal Power Commission has scheduled a hearing for April 8 on the application of Tennessee Gas and Transmission Company for authority to construct 400 miles of 26-inch and 10 miles of 24-inch loop line along its main transmission pipe line in Louisiana, Mississippi, Tennessee and Kentucky, build two new compressor stations in Texas and one in Louisiana and install 18 new compressor units in compressor stations in all four states.

Prospects of Permanent Market for Synthetic Rubber Shown in Report

A relatively small, but constant, market for the oil industry in supplying high fractions needed for synthetic rubber production is envisioned in a report of the Inter-Agency Rubber Policy Committee recommending permanent operation of the most efficient units built during the war to insure the production of 250,000 tons of rubber annually.

Turned over to private industry, this production would come only after world supplies of natural crude are back on a normal basis, a goal which the committee does not see possible before 1948.

For the current year, the country's petroleum-based synthetic rubber industry will have to work at capacity, producing about 550,000 long tons, and currently are being supplemented by the production of 50,000 to 60,000 tons from grain alcohol stocks in the hands of the government as a result of the failure of receipts of natural rubber from the Far East to come up to estimates.

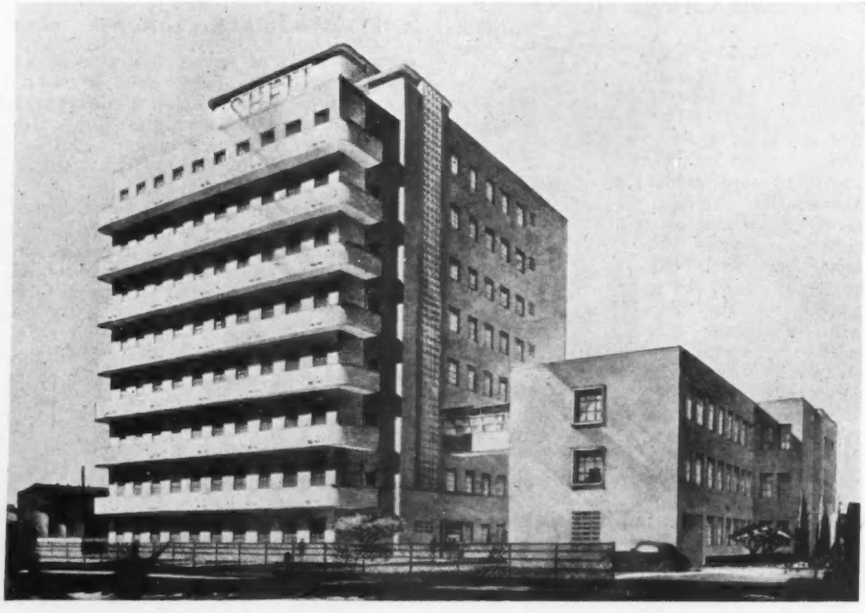
All of the synthetic production suggested by the committee would be from petroleum plants. Plants in excess of those required for the 250,000-ton program, if not acquired by private industry, should be maintained in adequate standby condition, and to avoid being completely dependent upon petroleum in the event of another emergency, it is recommended that at least one alcohol plant should be included.

"The rubber policy of the United States should involve the least possible interference with private enterprise, individual competition and free choice consistent with the over-all interests of the nation. Also, rubber policy should be so shaped as to involve the minimum cost to the United States Treasury and to consumers of rubber goods that it is possible to achieve while still adequately protecting the national interest."

The committee warned indirectly, that the producers of natural rubber may be expected to fight the synthetic product by reducing prices in the hope of freezing out the war-born industry. At the same time, synthetic at a price level around 15 cents which is now foreseen, will act as a brake on the price of natural rubber.

In a subsequent report, the committee will deal with the adminstrative method by which a minimum use of general purpose synthetic rubber can best be assured, research and development, plans for plant disposal, and the structure for national rubber supervision, etc.

Shell's Emeryville Research Unit



Plans for expansion of Shell Development Company's Emeryville, Calif., laboratories and staff (*The Oil Weekly*, March 18) call for extensive remodeling of present facilities and for three major new buildings, one of which is pictured above. Construction will start shortly, will continue over a two-year period, and will involve an expenditure of $3.5 million.

Last week ground was broken for Shell's new exploration and production research center in Houston, a $1 million project.

Senator Moore to Speak At Pacific API Session

Outlook for California oil, drilling costs, engineering problems in drilling and production, core analysis, electrical dynamic braking and problems of secondary recovery are topics scheduled at the Pacific Coast District API's Division of Production spring meeting in Los Angeles April 11-12. United States Senator Edward H. Moore will be the featured speaker of the program, Malcolm W. Morris, of Standard Oil Company of California, program chairman, has announced.

Following preliminary program has been arranged:

Thursday, April 11: "Experience with Electrical Dynamic Braking," by A. E. Wollem, Standard Oil Company of California, Taft; "Trends of Drilling Costs in California," by Ralph W. Marshall, Drilling and Exploration Company, Los Angeles; "Canal Field Gas-Injection Project," by R. P. Mangold, Shell Oil Company, Inc., Bakersfield; "Outlook for California Oil," by R. L. Minckler, General Petroleum Corporation of California, Los Angeles; "Waste-Water Injection in the Greely Field," by J. T. Crooker and F. H. Schnoor, Standard Oil Company of California, Taft; and "Review of Reservoir Performance—North Coles Levee Pressure-Maintenance Project," by W. J. Travers, Richfield Oil Corporation, Los Angeles.

Thursday evening's banquet will be addressed by Senator Moore.

Friday, April 12: "Performance of the Playa Del Rey Gas-Storage Reservoir," by L. S. Kelsey and E. C. Babson, Union Oil Company of California, Dominguez; "Current Concepts of Secondary Recovery and their Applications to California Reservoirs," by N. van Wingen, Richfield Oil Corporation, and Norris Johnston, General Petroleum Corporation of California—both of Los Angeles; "A Statistical Approach to Core-Analysis Interpretation," by Jan Law, Dominguez Oil Fields, Inc., Compton, and W. F. Cerini, Union Oil Company of California, Los Angeles; "Results of the Use of Oil-Base Fluid in Drilling and Completing Wells," by Glen V. Kersten, Western Gulf Oil Company, Bakersfield; "Review of Special Water-Base Mud Developments," by Ward R. Kelley, General Petroleum Corporation of California, and P. H. Ham, Superior Oil Company, both of Bakersfield, and J. R. Duley, Belridge Oil Company, Belridge; and "Casing Landing Practice," by John De Hetre, Youngstown Sheet and Tube Company, Los Angeles.

Further topics will be announced when the program is completed.

Illinois Meeting

Russell B. Brown, general council of IPAA, will be the principal speaker at the annual membership meeting of Illinois Oil and Gas Association scheduled March 29 at Mt. Vernon. The meeting will be open to all operators, company employes and royalty owners. Directors for the coming year will be elected.

Free Access by Russia to the Oil Of Near East Favored by Senator

Free access by Russia to the oil resources of the Middle East was advocated last week by Senator Claude Pepper of Florida as one of the a series of steps which should be taken to avert the dangers of another war in the near future.

Such privilege, Pepper told the Senate, would implement the covenant of the Atlantic Charter that nations shall have equal access to the raw materials of the world, "for as long as oil remains a critical commodity in the waging of war and in the pursuits of peace, that covenant implies that Russia shall have fair access to the oil reserves of territories outside her own homeland."

"Is it really surprising that the Russians should for a long time have been seeking oil concession in the north of Iran, adjacent to the Russian homeland, and have encouraged the independence movements in that area if they were denied such concession?" he asked. "We are not simple enough to believe that all of these concessions by foreign countries in the Middle East were procured without recourse to the tactics of power politics.

"I wonder what our attitude would be if the powers of the world had sought exclusive exploitation of the oil of Mexico, and the United States had been denied access to that area. Our own history is perhaps not free from diplomatic and military intervention for economic elbow room."

Pepper declared that Russia has as much right to a loan from this country as Britain, and needs such a loan to buy in this country the machinery with which to re-open her oil wells, rolling stock for her railroads and electrical equipment for her power plants.

As Pepper was speaking, the People's Lobby asked Trygve Lie, general secretary of the UNO, to request the governments of the United States, Britain and Russia to make public the terms of their existing and sought oil concessions in Iran when the issue between that country and Russia is brought before the council.

The People's Lobby also asked that the three governments be requested to announce whether they would agree to international control of Iran's oil resources, with the approval of the government of that country, and their allocation to nations needing them.

New Members Are Added To Engineering Committee

James P. Evans, Jr., independent producer of Jackson, Melbert Schwarz, Seaboard Oil Company of Dallas, G. C. Jones, Mississippi Power and Light Company of Jackson, Judge Cecil Morgan of Standard Oil Company of New Jersey, Baton Rouge, La. and I. P. LaRue, independent producer of Jackson, are new members of the Mississippi Oil and Gas Engineering Committee, thus giving the engineering cooperative 64 members. Activities of the committee are confined solely to factual geological and petroleum engineering studies of the various oil and gas fields of the area in which the members operate.

Subsidy Allowances For Ten More Pools Allowed

Subsidy allowances were extended to ten more pools, five of them in Texas, by the OPA last week, effective March 1 with allowances as follows:

Arkansas: Champagnolle, 35 cents per barrel.

Michigan: Zeeland, 25 cent.

Kansas: Jerry (Lansing) 6 cents.

Oklahoma: Shawnee, south, 7 cents; Weleeka, 10 cents (additional to 25 cents previously allowed.).

Texas: Beddo, 25 cents; Cayuga, 31 cents; Sayles, 5 cents (additional to 20 cents previously allowed); Stoneburg, 14 cents; Lenney Creek, 25 cents.

Crude Oil Production in the United States

(Estimates compiled by the OIL WEEKLY All figures indicate daily averages in barrels.)

STATE OR DISTRICT	PRODUCTION IN WEEK ENDED March 23	March 16
Alabama	1,000	1,000
Arkansas	77,100	77,350
California	847,800	849,000
Colorado	25,600	26,500
Florida	100	100
Illinois	208,600	206,300
Indiana	18,000	18,300
Kansas	259,400	252,750
Kentucky	31,750	30,550
Louisiana	375,850	375,200
North Louisiana	82,500	81,800
South Louisiana	293,350	293,400
Michigan	44,100	44,750
Mississippi	55,250	55,100
Missouri	100	100
Montana	19,900	19,100
Nebraska	800	800
New Mexico	97,000	97,500
New York	13,950	13,350
Ohio	7,350	7,550
Oklahoma	367,500	371,500
Pennsylvania	35,150	35,150
Tennessee	35	35
Texas	1,817,450	1,817,500
Upper Gulf Coast	418,850	418,850
East Texas Field	317,350	317,350
Rest of Eastern Texas	127,500	127,450
Southwest Texas	290,250	290,300
West Texas	436,500	436,500
North Texas	146,000	146,050
Panhandle	81,000	81,000
West Virginia	8,300	7,850
Wyoming	105,500	102,900
Total United States	4,417,585	4,410,235

Total stocks, foreign and domestic, March 16, as reported by the Bureau of Mines were 226,233,000 barrels with a daily average production of 4,415,000 and runs to stills 4,607,000.

Commission Checks Into Flared Gas at Seeligson

Operators from the Seeligson Feld appeared before the Texas Railroad Commission last week to show cause why the field should not be shut in if flare gas is not eliminated. The commission charged that 40 million cubic feet of gas is flared daily and that this gas has a liquid content of two gallons per thousand.

The companies outlined efforts made since 1943, when a committee was formed to study the field problems. During the war, application for materials to install a gasoline plant in the field was denied by PAW. Since 1944, a comprehensive study has been made and on March 6, 1945, operators decided that construction of a gasoline plant was feasible.

All but four operators in the field have indicated they favor unitization. One holdout is Humble Oil & Refining Company which opposes the plan because its King Ranch holdings would be included. At the hearing, the company said it was using a third of its gas for drilling operations and that for the next 18 months it could use the remainder.

Magnolia Petroleum Company has supported the program, as did Sun Oil Company and most of the other operators.

Whether the commission actually will close down Seeligson is doubtful, but it should be noted that this is the first time such a showing has been required of any group of operators, and is generally taken as an indication that the commission means business and will require operators to make definite efforts to conserve the gas.

Prevention of waste of gas flared in the Old Ocean Field, Brazoria County, Texas, will be discussed at a similar hearing scheduled April 17. The commission charges that 12,286,000 feet of gas are being flared daily.

Casper Engineers Elect

Officers of the newly-formed Casper Engineers Club, Casper, Wyo. have been named as follows: F. M. Clement, Continental Oil Company, president; R. M. Churchwell, Ohio Oil Company, vice president; and J. R. Schwabrow, U. S. Geological Survey, secretary-treasurer.

Fred M. Clement at the March meeting led an informal discussion on "Subsurface Pressure and Temperature Data." J. H. Barnett, Stanolind Oil and Gas Company is program chairman for the April meeting when "Reservoir Mechanics" will be discussed.

Export Licenses

Export licenses for distillate and residual fuel oil will be valid for a period of only 60 days from date of issue, the Department of Commerce office of international trade ordered March 19. Heretofore, licenses have been good for a period of one year.

Licenses issued previous to March 18 will expire 60 days after that date.

Oil Price Decontrol Is Needed Immediately

By L. J. LOGAN, Associate Editor

NOTHING short of complete decontrol of prices will either satisfy all elements in the oil industry or assure "right" prices for the various grades of crude or the numerous refined products. And the industry at last is reaching the point where it feels an obligation to the public welfare to demand removal of all oil price-fixing by the government.

Independent producers and refiners, as well as integrated companies, know there is no real shortage of petroleum; that proper pricing, determined in the traditional competitive way, will bring forth production in ample volume to fully satisfy all demands; and furthermore, that nobody can long get more for oils than they are actually worth under present conditions of demand and production. Potential supply is now in excess of demand, following postwar decrease of requirements, and any effort to overcharge will be promptly stopped by competitive new supply coming onto the market at the "right" price.

Knowing all these things to be true, and knowing how infallibly prices are automatically made "right" by the free functioning of competition in a normal market, the industry has no conscientious choice but to hold out with determination for the early, complete setting aside of the arbitrary price fixing which had its evils even as an emergency wartime measure.

No man can say, as of today, following five years of arbitrary price determination, exactly what is the "right" price for every grade of crude and every finished product at every field, refinery, and retail outlet—right for consumer, right for refiner, and right for producer. Yet no economist doubts that "right" prices will be determined, inevitably and promply, by the mechanism of the competitive system, driven by and sensitive to many inter-related economic forces.

Marvelous Mechanism

In this morvelous mechanism are resolved the differences of opinion regarding values, and in it are determined the "right" prices, which are simply the prices necessary to bring forth production that meets demand. If demand is not being met, price goes up and production increases to equal demand; and if demand is exceeded, price goes down and production is curtailed to equal demand. These relationships never are statis for long, and they have changed greatly in the past 5 years while oil prices were fixed.

The consumer, the refiner and the producer is each entitled to this guarantee of the "right" price for him, as determined by competition, rather than by arbitrary government price fixing. And so the oil man of every category supports a cause greater than his own individual interest in demanding an end to oil price fixing by the government. He demands the restroation of a system which will assure non-interference with production and which at the same time will guarantee fairness not only for every oil man but also for every consumer of oils.

OPA Revisions Not Satisfactory

OPA recently has promised a blanket 10-cent raise in crude price ceilings, authorized increases of 21 and 15 cents a barrels on residual fuel oil outside and in California respectively, and extended the earlier temporary increase of ½ cent a gallon on kerosine and distillate fuel oil.

While it has been said in some quarters that these are steps in the right direction, it may be countered that they are only belated steps in the wrong direction—the direction of unjustified permanent government regulation. The right direction might have been implied if at least some of the controls had been completely lifted, as in the case of gasoline prices, which certainly are not in danger of inflation, with practically all gasoline tanks bulging.

Viewed from another angle, the tardy OPA revisions are an indictment against the agency and its policy. The revisions were made not many months ago when they could have helped to prevent fuel oil shortages but now after serious shortages exist, involving the efficiency of the Navy and the Merchant Marine and thus affecting the national safety and welfare. Under free functioning of supply, demand, and price, the quotations for fuel oils long since would have worked upward, supply would have been met, and there might have been by now no upward pressure on fuel oil prices. Furthermore, the industry would not now be burdened with excessive gasoline stocks, which by depressing gasoline prices threaten to impose on the industry an aftermath cost of its vital wartime operation.

When the 10-cent crude raise was proposed by OPA, without corresponding increases in product prices, it was pointed out that the industry as a whole had been given no relief. The same is not far from true even after the fuel oil adjustments. For residual fuel oil heretofore was priced 10 cents a barrel less than the crude from which it came, and if left unrevised, residual would have been priced 20 cents a barrel under the new crude postings. With the 21 and 15 cent increases it still will be priced at no more than crude, and very little if any effort to meet the demand for it can be expected. Refiners likewise will not put forth special effort to supply kerosine and distillate fuel on the strength of the OPA changes that have been announced.

Therefore, it is indicated that OPA so far still is largely disregarding the national welfare in the face of warnings of the Navy; that the government, through OPA, is deliberately creating again a "too little and too late" situation, for which there is no excuse unless it be stupidity.

No "Special Situation"

To say that this is only a special situation is to revert to pre-war apathy. If it is a special situation, so is the fact that the U. S. has almost completely discontinued the making of military planes, while another great power makes no secret of its program to continue militarily strong. Put together enough special adverse situations and the sum is a vulnerable nation.

There are some things very much more important to the citizens of the United States than a few dollars a year difference, one way or the other, in the prices they pay for petroleum products. And among these first things that should come first is the maintenance of an adequately supplied Navy and an adequately supplied Merchant Marine.

In the case of meeting the continuing heavy demand for both light and heavy fuel oils, a competitively determined readjustment of prices is imperative. The shortage can be remedied easily enough, but not without diverting some crude from normal gasoline manufacture into the making of fuels. This readjustment of yields away from a higher priced product to lower priced products will entail loss unless compensating adjustments are made in the latter.

Furthermore, such adjustments directly affect different grades of crude in different degree, and no blanket change in crude prices can satisfactorily or equitably correlate raw material and finished product prices. Crude prices, too, must be determined competitively.

Disparities Need Correction

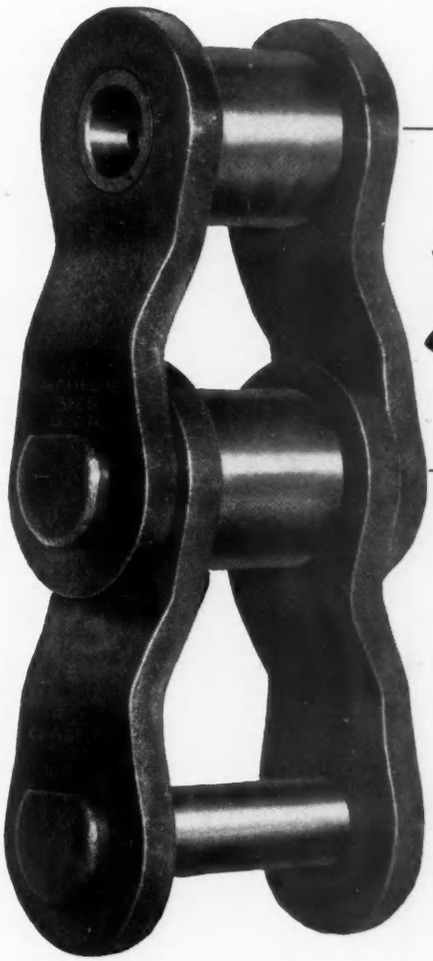
The industry urgently needs and apparently will hold out for complete price-decontrol and immediately thereafter a thorough overhauling of price schedules, from well to retail outlet. This complete readjustment is necessary in order to correct the many disparities which have accumulated in nearly five years of arbitrary, rather than competitive, price determination.

As pointed out by the head of an integrated company, these adjustments will depend on existing conditions of supply and demand, the changes in quality and quantity of products to be made from crude, the shifts in relative values of different crudes to improved refining processes, and other competitive factors.

These adjustments are needed not only for achieving efficient and adequate production currently, but also as a practical business basis for planning for the future meeting of demand. The industry has ahead of it the obligation of modernizing refining facilities to effect new economies for the consumers, at cost of millions of dollars. And in order to plan that work in a business-like way and get started on it, the industry must be guided by knowledge of current real values of products that will be made.

With the supply of petroleum now adequate to meet demand, it is both timely and necessary that petroleum industry prices be completely decontrolled.

Rex Field Engineer



$3\frac{1}{8}$" – this spells SPEED to your rigs!

We've combined high drilling speed with maximum load-handling ability in Rex Chabelco 3125 chain. With its relatively short pitch, it permits your rig to operate at considerably higher speeds than with the longer pitch rotary drilling chains.

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Rex Chabelco 3125 is sturdily built of highest quality steels, with alloy steel bushings, case hardened and ground inside and out for extra hardness and toughness. All parts are assembled with heavy force fits, assuring a chain link that stays put. The three-diameter pin makes field chain assembly and disassembly an easy job. For a chain that will add speed and long life to your rig, particularly for deep holes, investigate Rex Chabelco 3125.

Rex Oil Field Chains are the answer to every oil field service. There is a size and type to fit your needs. For information, see your Rex Field Engineer, your local supply store or write us direct.

REX Oil Field Chains

the chains that have grown up with the oil fields

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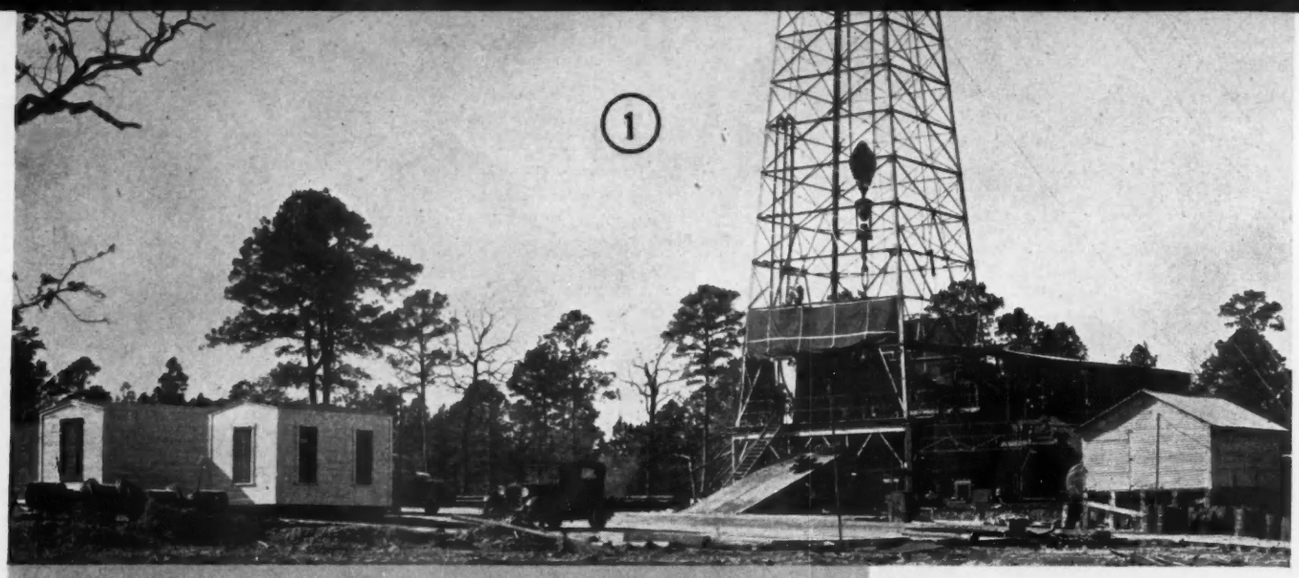
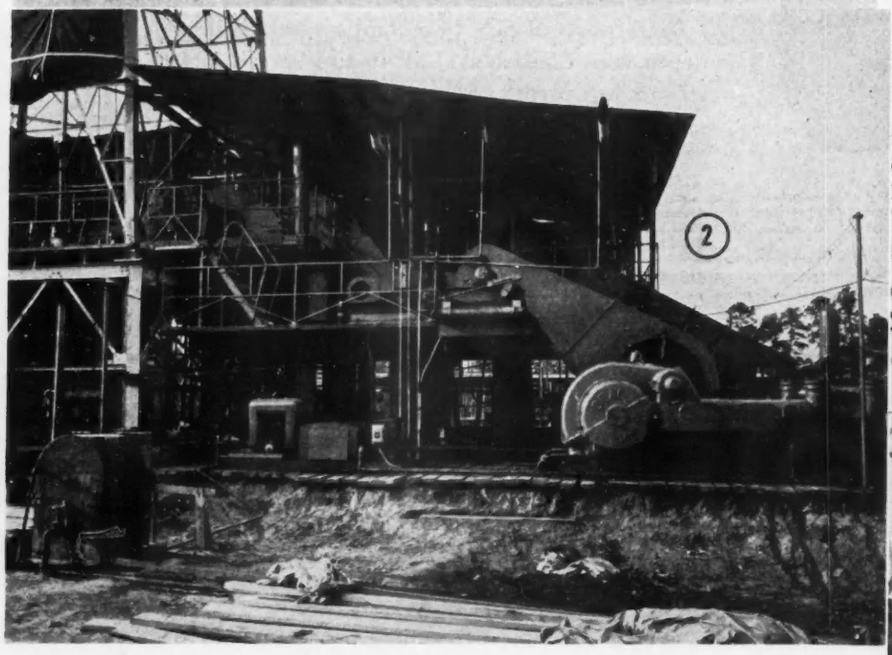


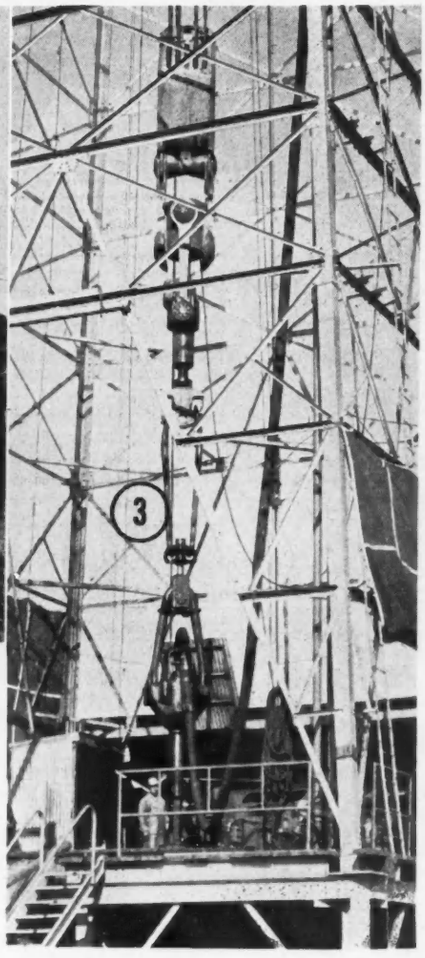
New Drilling Rig Incorporates Late Improvements

A NEW drilling rig recently placed in operation by Magnolia Petroleum Company has several interesting features. The rig has insulated crew change rooms, a clothes washing machine, a mud checking laboratory, an office with adjoining bunk room, covered steel mud tanks, and a mud checking laboratory. Everything about the rig has been mounted on steel skids and steel structures, and an abundant use has been made of folding steel catwalks.

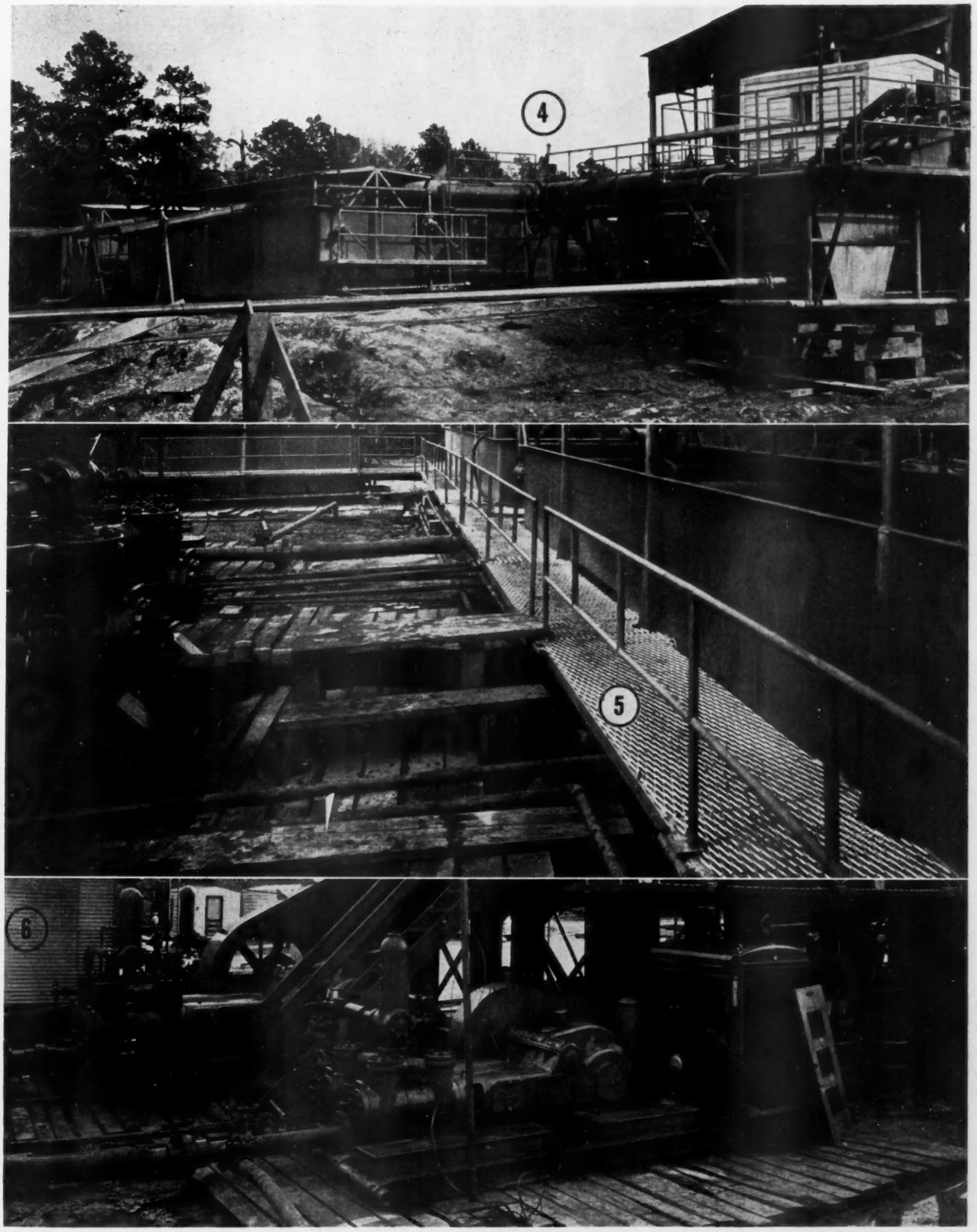
A direct hydraulic weight indicator and a connecting link that provides for rapid shift from drilling to hoisting operations are included in the rig's mechanical features.

Features of the rig are pictured on this and following pages.





1. General layout of rig showing insulated change rooms on the left. Corrugated mud house on right is set on steel foundation for portability.
2. Closer view of rig showing mud pumps on the right, 10-kilowatt electric generation plant in the center, and clothes washing machine in the left foreground. The gas-fired washing machine has a rotating inside tub powered by a half horsepower electric motor. Water inlet and outlet lines for filling and rinsing are shown in the front.
3. Direct reading hydraulic weight indicator is mounted directly under the traveling block similar to the way a dynamometer is hung on walking beam reins to measure polish rod loads on pumping wells. The hose leads off to a point of conneaction half way up the derrick corner, and thence to indicating dial in front of the driller. The swivel bail carries a special shank so that the elevators are used in both drilling and hoisting operations.



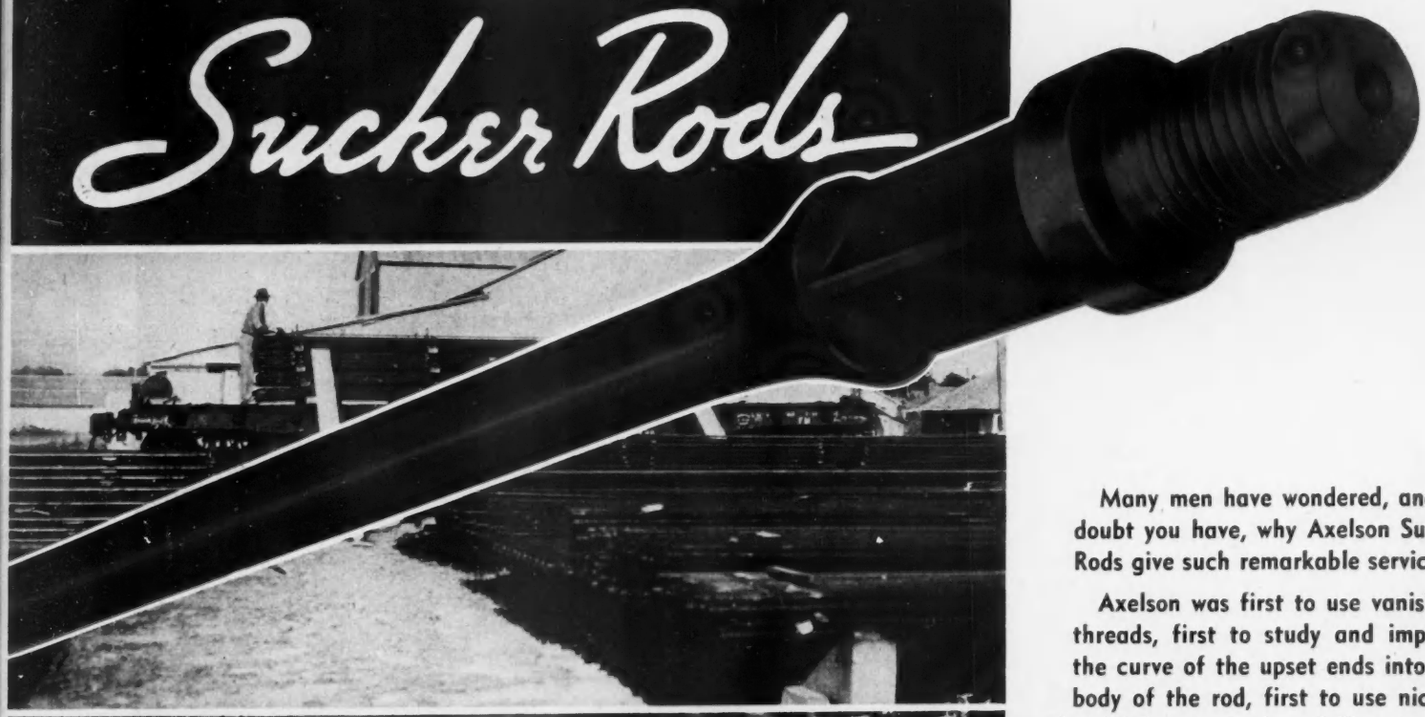
4. Light, spiral weld 20-inch pipe is used as a mud line. Shale shaker is mounted near edge of derrick floor (right foreground) with shale hopper beneath. White building in rear is mud checking laboratory. Receiving tank for mud is in left rear with jet lines protruding to left.

5. Mud flows through the three mud tanks from left to right in the picture. The tanks are interconnected by ten-inch lines at approximately two feet from the bottom. The same level is maintained in all three of the tanks. Note that the railings and cat-walks along tanks are hinged to allow them to be moved in sections.

6. This 150-horsepower pump is used for mud mixing and to supply water pressure for the blowout preventers. Suction can be changed easily from mud to water by switching to the water line shown in the front. Tool box on left and battery box on right are neatly fitted between the skids of the unit.

AXELSON *Sucker Rods*

THERE IS NO ECONOMICAL SUBSTITUTE FOR AXELSON QUALITY



Many men have wondered, and no doubt you have, why Axelson Sucker Rods give such remarkable service.

Axelson was first to use vanishing threads, first to study and improve the curve of the upset ends into the body of the rod, first to use nickel-molybdenum steel, and first to normalize and temper rods throughout their entire length.

Why?

Because daily, for more than 40 years, Axelson has been accumulating the most accurate, the most valuable, the most practical data in the world on what sucker rods do under varied conditions.

And this knowledge has been applied. Chemical analysis , physical properties, steel mill manufacturing methods, daily records on Axelson sucker rod equipped wells—these and many other things have been constantly considered and interpreted in terms of sucker rod life, resulting in steady progress and improvement.

Truly "There is no substitute for quality" . . . and no short cut to the sort of quality you find in Axelson sucker rods.

JONES & LAUGHLIN SUPPLY COMPANY

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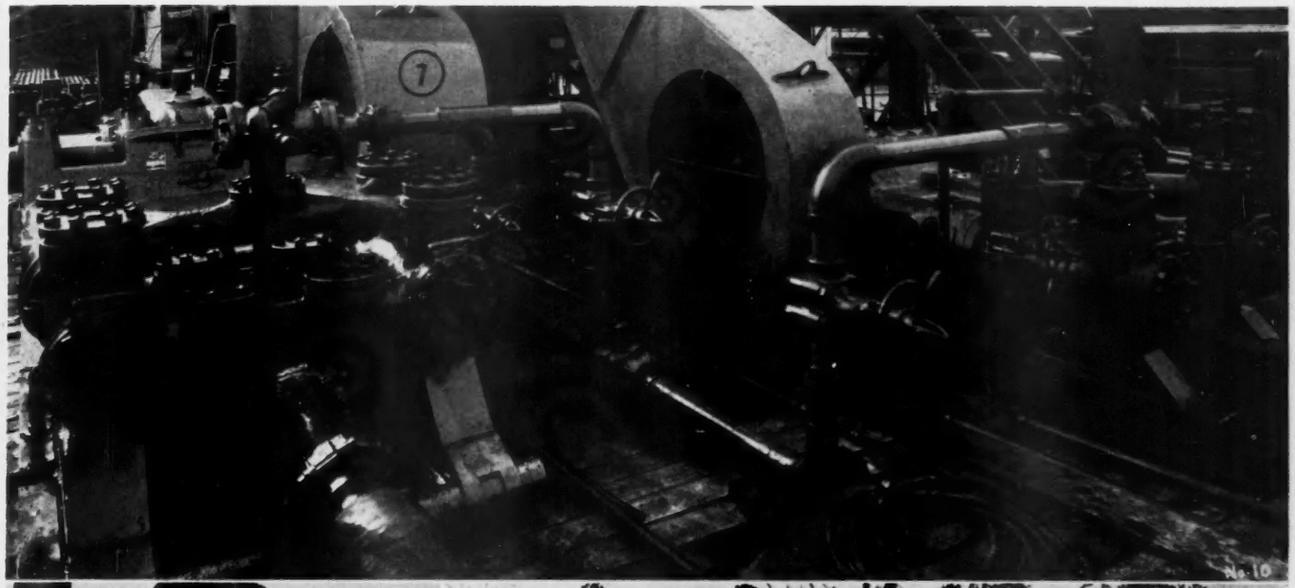
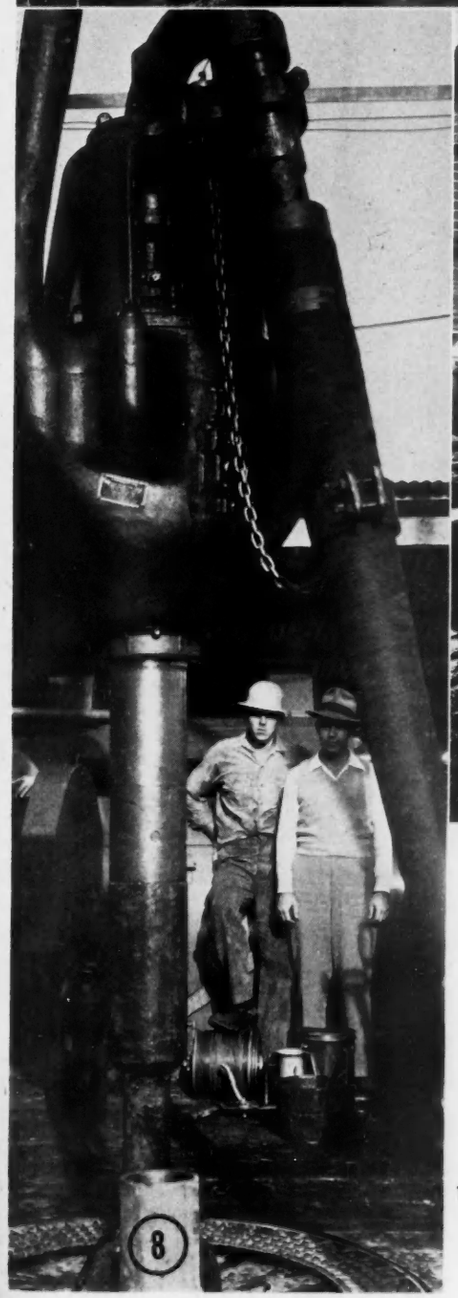
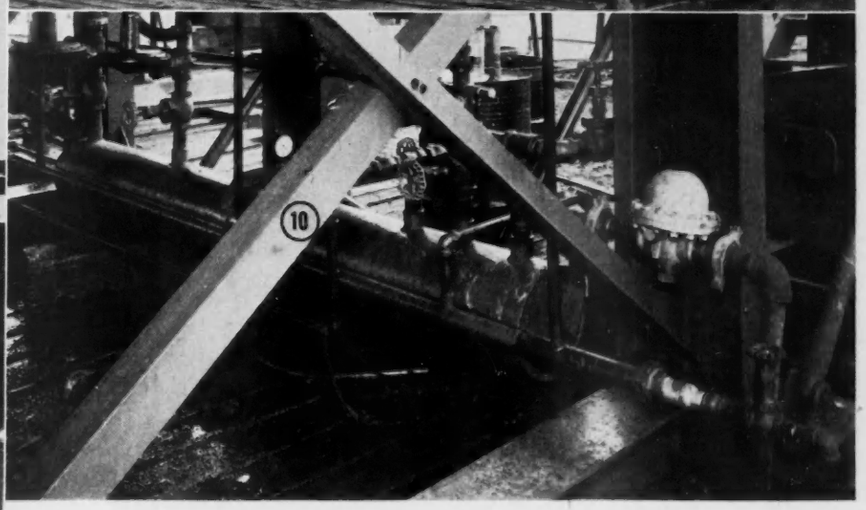




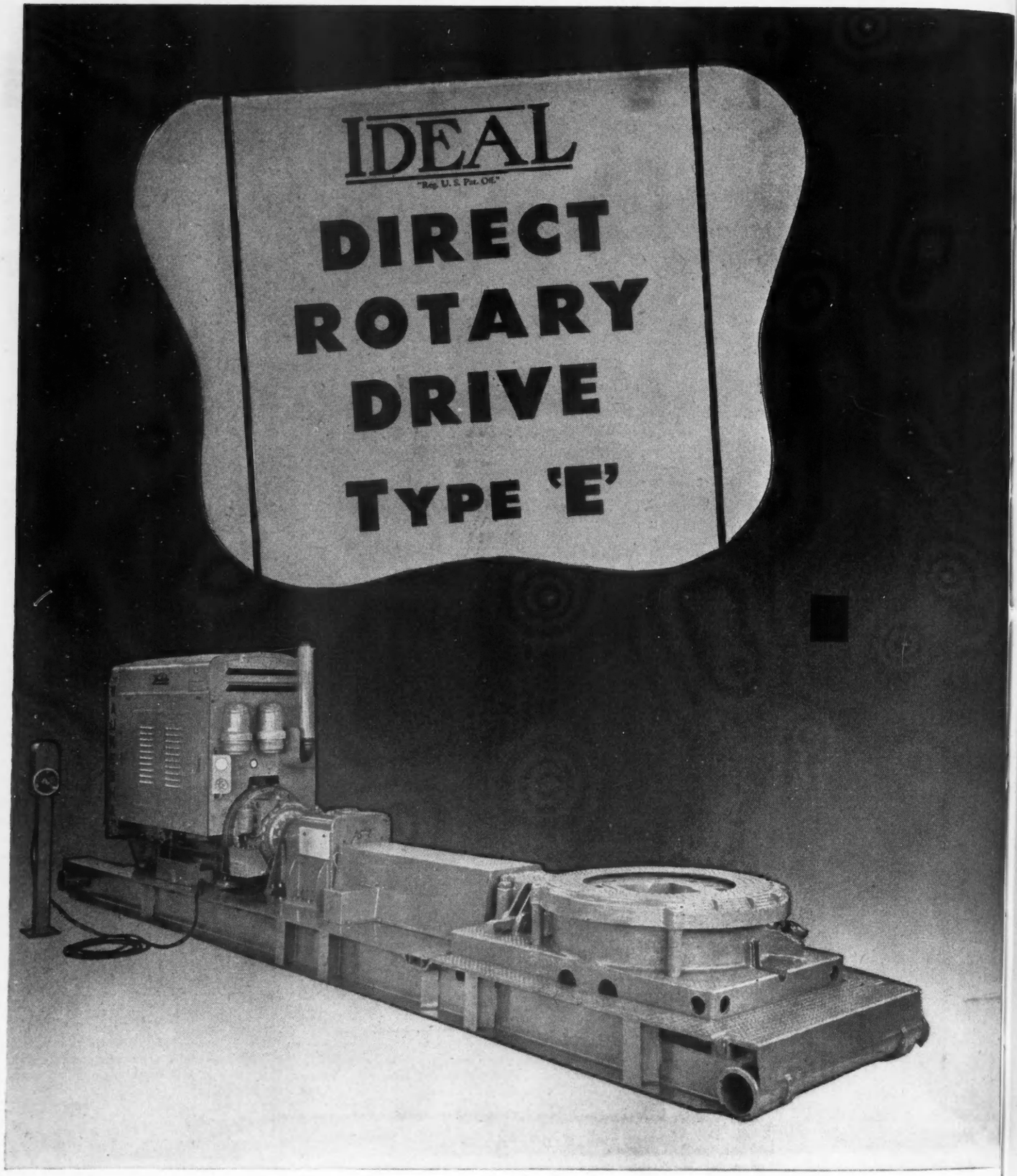


7. View of the mud pumps with 350-horsepower pump on the left and 250-horsepower pump on the right. Discharge lines are interconnected to facilitate switching from one pump to the other. Two-inch discharge lines lead to the mud guns, two of which are mounted on each tank. Outlets from shear relief valves are connected to mud tanks.
This view also shows how eigines are mounted on long bases so that the compounding unit rests on the extensions. The engines are interconnected by means of chain drives.

8. One feature of this 300-ton swivel is the ease of changing the wash pipe and packing. Entire wash pipe assembly can be removed from its housing without disturbing gooseneck. It is repacked on the derrick floor or replaced with a shop reconditioned assembly which is kept on hand. Hinged corrugated sheet behind swivel provided weather protection for the driller's stand.

9. Close-up of the auxiliary buildings, showing crew changing room at left, tool pusher's office with bunk room in rear, both of which are insulated, and the steel tool houses.

10. Natural gas and butane headers. Gas regulator at right reduces pressure to pounds for the volume tank; the regulators above volume tank reduce the pressure to ounces for engine consumption. Two-inch line in front is butane fuel line with one-inch line leading to each motor. Regulator is mounted on the storage tank and heat exchangers are mounted on each engine.



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Unitized, Portable Flooring and Racks Cut Pulling Costs

By GILBERT M. WILSON, Staff Writer

Figure 1. **Sectionalized and portable, these expanded-metal flooring units measurably increase efficiency of crew men, especially where ground is soft or muddy.**

GAINING favor among many companies operating in shallow, small production fields are the time and labor saving features of unitized racks which facilitate the laying of tubing and rods in singles, the need for which is occasioned by the current trend toward stripping the wells of derricks upon completion. Of unusual inetrest and practical value is the equipment, built up and employed extensively by one company, which consists of unitized expanded-metal flooring sections which facilitate work about the well head: demountable light-weight racks for tubing; and a novel system of supports for sucker rods.

Unitized Flooring

Contributing considerably to the working efficiency of the crew are the sectionalized, portable flooring units which are carried with the pulling service track and laid on the ground around the well head when tubing and rods are to be pulled. Measuring two feet wide and about ten feet long, the several sections are laid side by side, one matching pair being cut out along one edge to conform to the well head so no gap is left between the two floor sections. Sheets of expanded metal, laid out on angle iron frames and cut out and welded in place, form strong, skid-proof flooring units light enough to be picked up by one or two men, yet sturdy enough to remain intact under the tread of heavy men and occasional impact of heavy tools and fittings. Short angle iron legs at the corners aid in stabilizing the flooring and hold it off the ground an inch or two.

In soft ground surrounding the typical well, and particularly during rainy weather, this flooring measurably increases crew efficiency, the men being sure of their footing, permitting them to work faster. When tools or fittings are dropped, they are immediately reusable, without need for cleaning or rinsing in a solvent to remove mud and grit. Overflow from tubing on a "wet" pulling job runs down through the flooring, and may be drained off in a below-floor ditch, but the men are assured of dry, secure footing throughout the pulling job. Shown in Figure 1, the main flooring sections may be supplemented with shorter units, such as the hoist operator's stand, wherever they may be needed.

Demountable Tubing Rack

To eliminate heavy, clumsy, permanent and semi-permanent racks or "horses" across which tubing joints are laid, short, self-supporting legs are used. To the bottom of a short upright section of light pipe is welded a horizontal piece to serve as a base, and to the top, at right angles to the base piece, a half section of pipe forming a cradle to support the rack cross-bars as illustrated in Figure 2. By sinking the base piece into the ground a few inches as shown, and placing a length of pipe across matching pairs of these stands, the supports are non-skidding and are held in an upright position as firmly as though braced by additional legs.

The cross pieces supporting the racked tubing contain short pins of sucker rod material which permit segregation of the rack into two sections, this being of value when tubing is being sorted and inspected. By building the racks slightly higher at the well end of the unit, tubing will drain while stacked up. For easy hauling in the truck, the rack pictured breaks down into only six pieces - - - four light legs and two cross-arms. Because of the fact that the rack is portable and easily set up, it is possible to place the well-end of it very close to the edge of the flooring material surrounding the well, so tubing joints will overhang within easy reach of the men, saving many needless steps, and less run-out for the travelling block when picking up the individual joints.

Rod Rack Units Pinned to Ground

Of unique design are the numerous supports and cross-bars constituting the sucker rod rack. Because rods require far more support for a given length—particularly Range 2 material—than do tubing joints, five pairs of supports are employed along the length of one rod. To cut down weight of so many supports, a different principle was employed to hold them fixed to the ground. To the lower end of a short piece of 1½-inch pipe was welded a square steel plate. To the under side of the plate was welded a short pin of sucker rod material, the latter to be thrust into the ground as far as possible or until the plate becomes flush with the ground to provide a more secure footing. Across the top of the upright pipe section was welded a short split-open 12-inch length of light pipe which serves as a cradle into which is laid the six-foot rack cross-bar supporting the sucker rods.

A novel means was used also in preventing sucker rods from rolling off the rack. A short piece of sucker rod material was welded across the end of the cross-bar and to ensure its being held in the desired vertical position while sucker rods were being laid out on the rack, provision was made for the pin end to rest in a slot cut into the outer end of the cross-bar cradle as shown in the illustration. This slot serves the dual role of preventing the rods from rolling off and of locking the light rack supports into a single integrated unit when assembled. One of the principal advantages of this type of rack, aside from its lightness and ease of assembly, is the ability to lay it out along uneven ground. Gently undulating terrain does not interfere, and brush clumps, rocks and small gullies can be bridged easily by judicious spacing of the several pairs of rack supports.

The difference in cost and general utility between these simple, portable installations and permanent type racks is obvious. Despite the heavy duty required of the units, no sections are too heavy for one, and at most, two men to handle easily, the flooring units representing the heaviest single pieces. One man easily can lay out and set up the racks while others are stringing up the mast lines and preparing to remove the tubing head. Because of the small sizes of material used in constructing the racks, newly-pulled tubing and rods drain easily and without leaving large quantities of oil and sludge to be later wiped off the equipment. On every well, these highly unitized pieces of equipment help to pare down production costs.

Figure 2. **This tubing rack is demountable into only six pieces for easy transporting on the truck. When cross-bars are placed across supporting legs, the latter become rigid and skid-proof. Note that leg units are recessed in ground.**

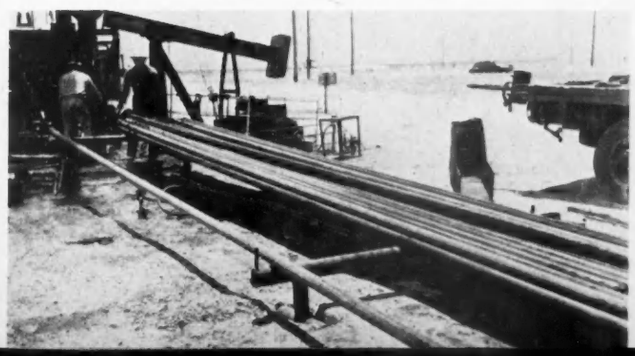

Figure 3. **Pins on the bottom of the legs driven into the ground hold the upright members of this highly unitized but light sucker rod rack in position. Retaining pins welded to ends of cross-bars are held erect by slots in leg sections.**

BY AN EXPERIENCED CREW

WITH MODERN EQUIPMENT

— A PLANNED PROGRAM

True, the search for oil will never end. And thanks to new geophysical techniques, the ratio of productive completions to exploratory tests is up.

For more than a decade, General Geophysical has helped keep these new discoveries on the upward trend by accurately applying these new techniques . . . with modern equipment . . . by skilled and experienced personnel.

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February Exploratory Drilling Increases

EXPLORATORY drilling in the United States during February was carried on at a slightly increased rate in comparison with the previous month and February of last year. This step-up in the rate of exploratory completions was in line with drilling in general, as February showed some increase in completion of wells of all categories.

During February, 1946, exploratory wells were completed at the weekly rate of 78.8, which is an increase over the 74.6 per week during January and 78.5 weekly in February, 1945. However, during the first two months of 1946 the weekly rate of completing exploration wells was 76.4, a 6.4 percent decrease from the 81.7 per week during the same period a year ago, while completions of all classes increased 13 percent over last year's figure.

Successful tests represented 21.3 percent of all the tests made in February, while only 17.2 percent were producers in the previous month. In the first two months of this year the degree of successful exploration increased to 19 percent compared to 17.7 percent for the first two months of 1945.

Total oil discoveries in the first two months of the current year amounted to 71, a 12.3 percent reduction from the 81 oil discoveries made in the comparable period of last year. The opening of new oil fields was reduced from 56 a year ago to 51, and discovery of new pay horizons in existing fields dropped 20 percent. Extensions to established fields increased from 24 a year ago to 28 so far this year.

New gas discoveries total 26 so far this year, an increase of 44 percent over the 18 discoveries made in the corresponding months of 1945. New gas fields accounted for 24 of these discoveries and the remaining 2 were new pays in existing fields.

Summary of Results of Exploratory Drilling

ITEM	Feb., 1946	Jan., 1946	2 Months JAN.-FEB. 1946	1945	Percent Diff.
Oil Discoveries	38	33	71	81	— 12.3
New Fields	25	26	51	56	— 8.9
New Pays	13	7	20	25	— 20.0
Distillate Discoveries	1	5	6	7	— 14.3
New Fields		2	2	5	— 60.0
New Pays	1	3	4	2	+100.0
Gas Discoveries	12	14	26	18	+ 44.4
New Fields	11	13	24	15	+ 60.0
New Pays	1	1	2	3	— 33.3
Total Discoveries	51	52	103	106	— 2.8
Extensions to Fields	16	12	28	24	+ 16.7
Oil Fields	14	8	22	22	.....
Distillate Fields		4	4	2	+100.0
Gas Fields	2		2		.....
Total Prod. Tests	67	64	131	130	+ 0.8
Dry Holes	248	309	557	605	— 7.9
(Weekly Average)	62.0	61.8	61.9	67.2	— 7.9
Wildcats	239	297	536	584	— 8.2
New Pays	7	9	16	9	+ 77.8
Outposts	2	3	5	12	— 58.3
Total Expl'tory Tests	315	373	688	735	— 6.4
(Weekly Average)	78.8	74.6	76.4	81.7	— 6.4
Percent Productive: (Weekly Average)	21.3	17.2	19.0	17.7	.....
Percent Dry: (Weekly Average)	78.7	82.8	81.0	82.3	.....

Dry hole completions are from weekly reports and totals represent completions for 4 weeks in February, 1946; 5 weeks in January, 1946; 9 weeks in Jan-Feb., 1946; 9 weeks in Jan.-Feb., 1945.

See tables on pages 46-47

Results of Exploratory Drilling in February and First 2 Months, 1946-1945, By Districts

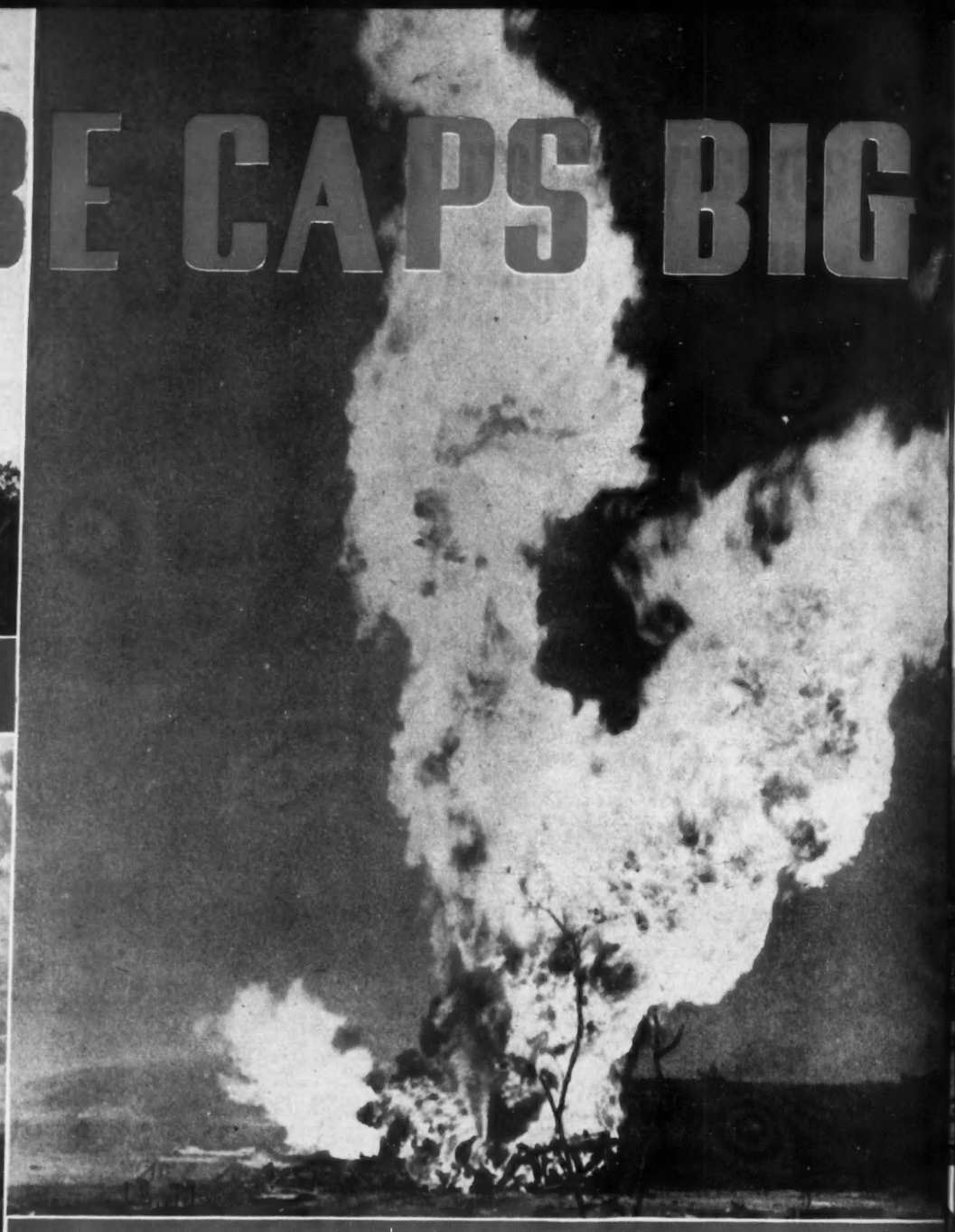
State or District	MONTH OF FEBRUARY, 1946														FIRST TWO MONTHS, 1946													
	Productive Tests									Total Productive	Unproductive Tests			Total Exploratory Tests	Productive Tests						Total Productive		Unproductive Tests			Total Dry		Total Exploratory Tests	
	New Fields			New Pays			Extensions								New Fields			New Pays			Extensions								
	Oil	Gas	Dis.	Oil	Gas	Dis.	Oil	Gas	Dis.		Wildcats	New Pays	Outposts		Oil	Gas	Dis.	Oil	Gas	Dis.	Oil	Gas	Dis.	2 Mo. 1946	2 Mo. 1945	Wildcats	New Pays	Outposts	2 Mo. 1946	2 Mo. 1945	2 Mo. 1946	2 Mo. 1945
Alabama											5			5												2			2	3	2	3
Arkansas											13			13		1										1			7	9	8	9
California											2			2												1			45	38	46	38
Colorado											1			1															3	2	3	2
Florida																													4	1	4	1
Georgia																														2		2
Illinois	2			1			5			8	26			34	3			2			6			11	13	60			60	47	71	60
Indiana				1			1			2	5			7	3			2			1			6	1	11			11	20	17	21
Iowa																														1		1
Kansas	1						6			7	16			23	5						8	1		14	17	46			46	65	60	82
Kentucky											7			7	2	1		2						5	1	15			15	25	20	26
Louisiana	2			1						3	11			14	6		1	1		2				10	15	21			21	27	31	42
North Louisiana											7			7	1					1				2	3	15			15	19	17	22
South Louisiana	2			1						3	4			7	5		1	1		1				8	12	6			6	8	14	20
Michigan	1				1		1			3	27			30	2				2		2			6	2	40		1	41	38	47	40
Mississippi											3			3											1	8			8	22	8	23
Missouri											1			1												1			1	1	1	1
Montana																										1			1	1	1	1
Nebraska																													1		1	1
New Mexico				1						1	3			4				1			1			2	1	10	1		11	15	13	16
New York											1			1												1			1		1	
Ohio	1	4						1		6	2			8	1	6						2		9	5	7			7	12	16	17
Oklahoma	9	5		1						15	16			31	15	2		1	5		1			24	22	50			50	44	74	66
Pennsylvania																2								2							2	
Tennessee																										1			1		1	
Texas	8	1		8		1	1	1		20	97	7	2	126	13	5	1	11		2	2	3		37	50	197	15	3	215	225	252	275
E. Texas Border	1							1		2				2	1	1						1		3		1			1	4	4	4
Rest of E. Texas											7	1		8							1	1		2	3	17	1		18	12	20	15
North Texas	1			2						3	24	1		28	5			4						9	11	44	3		47	48	56	59
West Central Tex.	1									1	9	2		12	1	1								2	3	29	3		32	17	34	20
West Texas	1	1		1						3	21	3	1	28	2	2		2						6	7	26	5	2	33	52	39	59
Panhandle																										4	1		5	3	5	3
Upper Gulf Coast	2			3			1			6	14			20	2			3			1			6	13	21			21	22	27	35
Lower Gulf Coast				1		1				2	11			13			1	1		2		1		5	8	31	2		33	38	38	46
Southwest Texas				1						1	5		1	7		1		1						2	5	13		1	14	25	16	30
South Central	2									2	6			8	2									2		11			11	4	13	4
West Virginia		1								1	1			2		2								2		3			3		5	
Wyoming	1									1	2			3	1									1	2	4			4	6	5	8
Total U.S.	25	11		13	1	1	14	2		67	239	7	2	315	51	19	2	20	7	4	22	6		131	130	536	16	5	557	605	688	735

JOBE CAPS BIG

On November 11, while running tubing, RG-6 blows out.

Water lines are laid to well to protect workmen before blaze is extinguished

Water reservoir in foreground of blazing well. Nine water wells drilled to assure ample supply



Two weeks later, while moving derrick, flow of oil and gas ignites.

Fire shot out with 550 lbs. nitro and wreckage removed so that flow is up and away from workmen. Flow at right is leaking thru plug valve on tubing outlet.

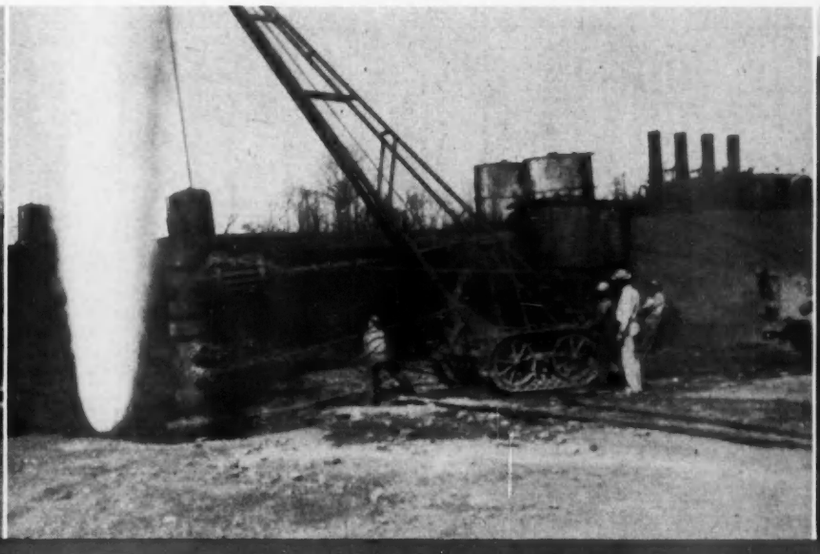
Defective tubing wing valve is removed and Jobe and crew install improvised hinge flange around set screws in tubing head flange.

BLOWOUT

When Mene Grande RG-6 in the Santa Rosa field of Southeastern Venezuela blew out on November 11, 1945, and caught fire two weeks later, seriously burning several members of a fire fighting crew, John Jobe, Houston, Texas, well capping specialist, was flown to the South American location by the oil operators. A pictorial account of how Jobe and his crew of experts subdued the flaming wildcat is presented herewith.

John Jobe—Widely known wild well expert, formerly associated with M. M. Kinley Company for nine years.

Capping manifold with Cameron pressure operated gate valve.



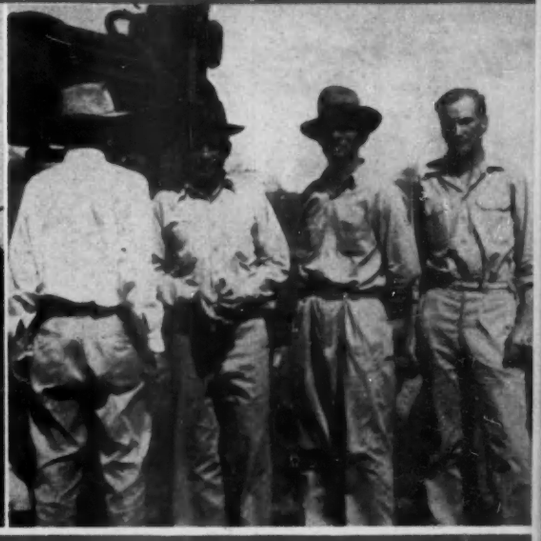
Ginpole-equipped tractor lowers capping manifold to well head.

Lower flange of manifold spool hinged to tubing head flange.

Capping manifold turned 180-degrees to direct flow thru manifold.

With closing of pressure-operated gate valve in manifold, capping operations are completed.

The capping crew, weary but happy, from left to right: C. A. Hanks, John Jobe, and C. W. Embrey.



JOHN JOBE COMPANY

2101 PARK, HOUSTON 6, TEXAS • TELEPHONE J-21354

New Oil and Gas Fields and New Pay Horizons Discovered in the United States in February, 1946

Also Important Extensions to Established Fields

COUNTY	FIELD	COMPANY, WELL AND LOCATION	Date Spudded	Date Completed	Total Depth (Feet)	Completion Horizon (Feet)	[1]Name, Character and Age of Producing Formation	[2]Initial Production Method and Choke	Gravity of Oil	[3]Structure: [4]Method of Discovery	Tentative Evaluation of Discovery or Extension (Opinion of Relative Importance of Area from General Viewpoint of the Industry Based on Pertinent but Necessarily Incomplete Data: Later Development or More Complete Data Obviously Might Require Revision of this Tentative Opinion)[5].
		ILLINOIS—New Oil Fields									
Clay	Flora, S	Deep Rock's Given 1, nw nw se, 4-2n-6e, 3 mi se Kenner pool	12-27-45	2- 5-46	2988	2978-2988	McClosky li; Miss	V 189	....	.....	1 well dr and 1 offset loc made.
Jasper	Willow Hill, E	Pure and Carter's Dodd 1, s sw ne, 6-6n-11e, 2½ mi se Willow Hill pool	2- 1-46	2-26-46	2732	2642-2650	McClosky li; Miss	V 100	....	.....	.....
		ILLINOIS—New Oil Pay									
Clay	Ingraham, W	Kingwood's W. H. Wyatt, se ne se, 14-5n-7e, loc on w edge of pool	11-22-45	1-12-46	2938	2680-2700	Bethel sd; Miss	P 102; 94 wtr	....	.....	Pool prods mostly from dpr pays. Probably not an imp sd.
		ILLINOIS—Oil Field Extensions									
Coles	Mattoon	National Consumers' Arthur 1, sw nw ne, 2-12n-7e, 1 mi n ext	12-21-45	2-26-46	1962	1942-1962	Rosiclare sd; Miss	P 22; 27 wtr	....	.....	.....
Hamilton	Springerton	Sohio's Thomas 1, sw sw se, 11-4s-7e, ¾ mi n ext	11-16-45	2-19-46	3504	3263-3270	Aux Vases sd; Miss	P 8; 1 wtr	....	.....	.....
Wayne	Keenville	Mitchell's Cornstubble 1, sw sw sw, 27-1s-5e, ¾ mi nw ext	12- 8-45	2-12-46	2973	2960-2968	Aux Vases sd; Miss	P 175; 300 wtr	....	.....	.....
White	Brownsville	McBride's Pryor 1, sw sw se, 32-5s-9e, ½ mi e ext	11-30-45	2-26-46	3180	3099-3107	L. O'Hara li; Miss	P 5; 20 wtr	....	.....	.....
White	Brownsville	Pure's Adams "A" 1, ne nw se, 6-6s-9e, ½ mi s ext	1-10-46	2-19-46	3170	3097-3125	Rosiclare li; Miss	P 100; 118 wtr	....	.....	.....
		INDIANA—New Oil Pay									
Gibson	Mt. Carmel, E	Ryan Oil Co.'s Clift Heirs 1, sw se sw 23-1s-12w	.....	2- -46	1668	1649-1668	Tar Springs sd; Miss	P 15	....	.....	.....
		INDIANA—Oil Field Extension									
Gibson	Wheeling	W. L. Lichlyter's Johnson 1, ne ne se 9-1s-9w	.....	2- -46	1404	1394-1404	Oak City sd; Miss	P 30	....	.....	.....
		KANSAS—New Oil Field									
Cowley	.....	E. S. Adkins et al's Lambach 1, sw nw ne 8-33s-3e, ½ mi e Thurlow and 1½ mi w Graham pools.	.....	2-24-46	3513	3509-3513	Arbuckle li; Cam	F 160	39	Str trp; sub & dr	Fairly imp disc; Arbuckle li has plenty of "kick" and dr my link both areas.
		KANSAS—Oil Field Extensions									
Barton	Merten	Virginia Drlg. Co.'s Howell 1, se se ne 36-18s-15w, ¾ mi ne ext	.....	2-12-46	3496	3494-3496	Arbuckle li; Cam	P 98	....	Str trp; dr	Proves addtnl 400 acs in pool.
Cowley	Couch	Ed Adair & Harvey Blair's Sandstrum 1, ne ne ne 14-30s-5e, ½ mi w ext	.....	2- 1-46	2824	2764-2824	Bartlesville sd; Penn	P 200	....	Ant; seis & sub	Well seems to indicate prod sect of pool is on edge of main struct; further dr expected immediately.
Cowley	Deichman	Ben Gralapp's Deichman 1, ne se nw 23-31s-4e, ½ mi w ext	.....	2- 9-46	2971	2930-2971	Bartlesville sd; Penn	F 300	38	Ant; dr	Sd highly saturated, porous; fairly gd disc.
Ellsworth	Edwards	Nelson Drlg. Co.'s Williams 1, nw sw nw 22-17s-8w, ½ mi n ext	.....	2- 2-46	3259	3242-3259	Arbuckle li; Cam	P 21; 1 wtr	....	Str trp; dr	Not very imp.
McPherson	Crowther	The Elbar Corp.'s Clark 1, ne ne ne 34-17s-1w, ½ mi s ext	.....	2-24-46	2745	2726-2745	Mississippi chat; Miss	P 120; 40 wtr	....	Str trp; dr	Fairly gd; opens abt 300 addit acs in pool.
Saline	Salina	Currier & Keys Drlg Co.'s Crawford 1, se nw nw 18-14s-2w, ½ mi w ext	.....	2-19-46	3267	3260-3267	Viola li; Ord	P 50	....	Ant; sub	.....
		SOUTH LOUISIANA—New Oil Fields									
Allen	Oberlin	Humble's Mrs. J. A. Bel Estate 1-B, c nw ne 33-5s-4w	7- 6-45	2-11-46	13150	12650-12669	Wilcox sd; Eoc	F 74; 2.7 mln; $\frac{8}{64}$"	47.5	D; seis	Imp disc—first Wilcox sd in parish.
St Charles	Hahnville Prospect	Union of Calif.'s Milliken & Farwell 1, start e cor sect 74-12s-19e, go e 4790.36 th n 2875.85 to loc in 26-12s-20e.	11-16-45	2-15-46	9981	8770-8786	Miocene sd; Mio	F 25; 0.5% wtr; ¼"	39.3	D; refl. seis	Imp disc opening a highly prospected area.
		SOUTH LOUISIANA—New Oil Pay									
Acadia	Egan	Sun-Sohio's Hayes A-1, 38-9s-1w	12-19-45	2- 3-46	10649	9897-9908	Frio sd; Olig	F 175. $\frac{8}{16}$"	47.4	D; seis	Field's disc sd at 10,470 feet.
		MICHIGAN—New Oil Field									
Tuscola	Arbela	Fred Riddell's Clark 1, ne se nw 33-10n-7e, 6 mi se Birch Run pool	12- 6-45	2- 7-46	2554	2551-2554	Dundee li; Devo	F 11; 6 mln	....	Ant; seis & geol	.....
		MICHIGAN—Oil Field Extension									
Allegan	Monterey	W. Spencer Cook's Brenner 1, se nw ne 15-3n-13w, 1 mi e ext	1- 2-46	2- 5-46	1684	1680-1684	Traverse li; Devo	F 226	42	Coral reef; geol	.....
		MICHIGAN—New Gas Pay									
Gratiot	Elba	A. E. William's Long 1, nw se se 15-9n-1w	1-22-46	2-13-46	700	650- 670	Michigan Stry sd; Miss	F 3.45 mln	....	.....	.....
		NEW MEXICO—New Oil Pay									
Lea	Penrose-Hobbs	Rowan Drlg Co.'s Elliott 2-B-15, e ne ne 15-22s-37e, offsetting 6500 ft Yeso prod; nearest Glorietta is 1½ mi e by n in Paddock fld.	12-16-45	2-22-46	5350	5117-5219	Glorietta li; Perm	F 218; 42 wtr; ¾"	38	Ant; geol	This intermediate Perm pay may prevail at intervals ovr lge ar, having bn passed up by dpr. prods.
		OHIO—New Oil Field									
Trumbull	.....	Hickman et al's J. B. Everett 1, Lot 6, Vernon Twp	.....	2- -46	3336	3306-3332	Oriskany sd; Devo	P 8	....	.....	.....
		OHIO—New Gas Fields									
Ashland	.....	Ohio Fuel's O. S. Vance 1, Sec. 29, Hanover Twp	.....	2- -46	2786	2746-2751 2772-2779	Clinton sd; Sil	F 7 mln	....	.....	.....
Columbiana	.....	Ohio Oil-Galey's G. L. Powell 1, ne Sec. 22 Madison twp. se of W. (Power) Point.	.....	2- -46	4474	4465-4474	Oriskany sd; Devo	F 2.84 mln	....	.....	.....
Columbiana	.....	Snee and Elberly's B. Humphrey 1, Sec 34, Knox Twp	.....	2- -46	5582	5366-5469	Clinton sd; Sil	F 0.18 mln	....	.....	.....
Mahoning	.....	J. W. McIntosh's Geo W. Dunn 1, Sec 1, Goshen Twp	.....	2- -46	3532	3522-3532	Oriskany sd; Devo	F 0.15 mln	....	.....	.....
		OHIO—Gas Field Extension									
Stark	Canton, N	Smith Pet.'s Ravenna Realty 1, Sec. 31, Plain Twp, ½ mi w ext	.....	2- -46	4548	4530-4548	White Clinton sd; Sil	F 2.49 mln	....	.....	.....
		OKLAHOMA—New Oil Fields									
Canadian	.....	Fox & Fox's Simpson 1, cse sw 9-14n-5w, 3½ mi n of Piedmont	.....	2- 1-46	8385	7085-7100	Bartlesville sd; Penn	F 100	....	Dr	Undetermined; temp. abnd. late in 1945; reopened, it shwd hole full of oil; accum press caused flw but prod declining.
Creek	.....	Skelly Oil Co.'s Hobart 1, ne sw se 8-17n-10e, abt 2½ mi w of Kellyville	.....	2-25-46	2990	2974-2990	Wilcox sd; Ord	P 58	....	Ant; seis	Possible sml struct; gd rec anticipated.
Garvin	.....	Globe Oil & Ref. Co.'s Gibson 1, cse ne 30-3n-2w, 5 mi sw of Antioch pool	.....	2-21-46	7753	6533-6539	Penn sd; Penn	F 400	42.8	Ant; seis & sub	Imp disc; active dr campaign projected in gen ar.
Logan	.....	Sinclair-Prairie's Teuscher 1, se se sw 34-15n-1w, abt 3 mi n of Arcadia NE pool	.....	2-12-46	5941	5929-5941	Wilcox sd; Ord	F 600	37	Ant; sub & seis	Imp new reserve; struct exten unknown at present.
Okfuskee	Morse	Doak & Hughes' Franks 1, nw nw ne 20-12n-10e, 2 mi ne of N. Okemah pool	.....	2- 5-46	3110	3070-3075	Waupanuka li; Penn	P 10	38	Ant; sub	Not considered imp.
Osage	G.I. Joe	Virgil Greenwood's Osage 1, se nw ne 13-22n-11e, abt 2 mi ne of Branstetter Dist.	.....	2- 1-46	1626	1608-1626	Tucker sd; Penn	P 100	38	Ant; dr	Small struct "pimple"; est rec abt 8000 bbls ac.
Seminole	.....	Globe Oil & Ref. Co.'s Davis-Patterson 1, sw sw nw 22-9n-7e, abt 2½ mi se of E. Seminole pool.	.....	2-15-46	3450	3430-3450	Cromwell sd; Penn	F 130; 22 mln; ½"	38	Ant; sub & seis	Imp strike; indicates long life prod; struct may cover 840 acs.
Stephens	West Velma	Amerada's Sledge 1, ne sw se 8-1s-5w, 1½ mi s of Cruce pool	.....	2-23-46	3625	2210-2240	Penn sd; Penn	P 7	31	Ant; seis & sub	Although ip of well is sml, current dr indicates this is edge well with struct extending over 2 mi sw where Sledge 2 is shwng approx 100 bbls oil daily.

Stephens		W. H. Atkinson et al's Peck Heirs 1, se sw sw 32-2s-6w, btw Comanche and Woolsey pools.		2-16-46	2483	2440-2483	Arbuckle li; Cam	Sw 200	20	Str trp; dr	Undet as to extent due to complex geol picture in gen area.
		OKLAHOMA—New Oil Pay									
McClain	Washington	The Carter Oil Co.'s Vierson 1, cse ne 8-7n-3w, in Washington pool		2- 7-46	10681	9668-9992	Bois D'Arc li; Devo	F 445; 2½"	41	Ant; seis	Gives the dp Washington pl which prods from 2nd Wilcox sd, a shallower prod horizon and grtly incrs res in pl.
		OKLAHOMA—New Gas Fields									
Atoka		Ed. J. Kubat's Gudgel 1, se ne nw 15-3s-9e, abt 1½ mi w of Boggy Depot		2-13-46	2811	2800-2811	Oil Creek sd; Penn	F 2.5 mln		Ant; dr	Not condisered important.
Creek		Davon Oil Co.'s McVey 1, ne ne nw 29-15n-7e, abt 1 mi ne of E. Stroud pool		2- 1-46	2915	2860-2915	Prue sd; Penn	F 1.5 mln		Ant; seis	Not important.
Hughes		Skelly's Price 1, sw ne nw 26-8n-10e, 3½ mi se of old Yeager pool		2-25-46	3465	3330-3420	Cromwell sd; Penn	F 10.5 mln		Ant; seis & sub	Good gas disc; struct may cover sect or more.
Okfuskee		Public Service Corp.'s Rose 1, cnw se 28-10n-12e, 6 mi se of Weleetka		2- 5-46	2363	2355-2363	Gilcrease sd; Penn	F 2.5 mln		Ant: seis	Struct probly sml; well sprayed some oil and if dr dpr might prod. oil.
Payne		Home Gas Co's School Land 1, nw ne sw 36-18n-4e, abt 3 mi w of Cushing		2- 2-46	3705	3690-3705	Bartlesville sd; Penn	F 4.5 mln		Ant; seis	Structly small; not impotrant.
		EAST TEXAS BORDER COUNTIES—New Oil Field									
Harrison		R. W. Williams' J. M. Furrh Est. 1, Francis O'Neil sur, 3 mi w Elysian fids	12- 9-45	2-27-46	6850	6291-6330	Travis Peak sd; L. Cre	F 20; $\frac{11}{32}$"	31.9		
		EAST TEXAS BRODER COUNTIES—Gas Field Extension									
Harrison	Whalen	Placid Oil Co.'s Mattie Lee Knox et al 1, Benjamin Parker sur., 3 mi sw Harleton. 1 mi sw ext.	11- 9-45	2-20-46	8300	6800-6828 7346-8084	Rodessa sd; Jur Travis Peak sd; L. Cre	F 8 mln F 20 mln			
		NORTH TEXAS—New Oil Field									
Young		Hanlon & Buchanan, Inc's Lena Kendall 1, 2271 ft. snl and 2621 ft. ewl Sec. 4, J. Crosby sur, A-1722; 1½ mi s by w of prod.	1-21-46	2-15-46	3481	3466-3481	Bend li; Penn	F 316; ¼"	42	Ant; geol	Unusually prolific for natural potential; far enough from failures to dev into sizable prod ar.
		NORTH TEXAS—New Oil Pays									
Cooke	Sivels Bend	Standard Oil Co. of Texas' Isham Beasley 2, 610 ft nsl and 2145 ft ewl of 519-ac lse, J. McKerley sur. A-639.	10-22-45	2-28-46	9164	8905-8940	Ellenburger dolo; Ord	F 166; ¼"	41.7	Ant; geol	This dpst of 5 oil prod zns and 1st test below Strawn. Possibly more prolific Ellenb elsewhere on large struct.
Wilbarger	National	National Associated Pet. Co.'s Sam Kelly 5-B, sw nw se H&TC Ry. 36, blk 13	11-27-45	2- 6-46	4895	4306-4318	Basal Strawn (KMA) li; Penn	F 456; ½"	38	Ant; geol	5th oil zn for fld and 3rd for Strawn series; no failures. Top of Canyon comparatively low, but top of Ellenb is high.
		WEST CENTRAL TEXAS—New Oi Field									
Taylor		West Central Drlg Co.-J. C. Karcher et al's J. R. Ingram 1, 330 ft wel and 970 ft. nsl Labor 18, League 146, Grimes csl, 3 mi w by n of nrst prod.	10-20-45	2-13-46	3110	2741-2742	U. Hope li; Penn	P 53; 99 wtr	40	Ant; geol	Possibly long narrow struct with miltu-pays near apex. 10 ft of oil saturation followed by wtr. Owners have 1228-ac blk.
		WEST TEXAS—New Oil Field									
Ector		Texas Co.'s T. P. Land Trust-Fraser 1-D, c sw nw T & P Ry. 27, blk 45, T-1-S, 1 mi se of TXL fld and separate reservoir.	6- 4-45	2- 7-46	10975	10790-10890	Ellenburger dolo; Ord	F 1700; ½"	41.9	Flt ant; geol	Top of Ellen 1162 ft structly lwr than nearest TXL-Ellen well due to flt; involves separate reservoirs. New strike has abt 180 ft effect pay abv wtr table; single well res of 600,000 bbls. Prod ar speculative since multiple flts may prevail.
		WEST TEXAS—New Oil Pay									
Howard	Howard-Glasscock	Continental-Group One Oil Corp.'s W. R. Settles 1-D-133, se nw nw W&NW Ry. 133, blk 29, offsetting reg Permian prod.	8-24-44	1-30-46	10122	8924-9080	Crinoidal li; Penn	P 31; 2 wtr	40.6	Ant; geol	Orig tem abnd 7-45, pending installation of pump unit. Not comm, but will encourage further dp exploration in general area.
		WEST TEXAS—New Gas Field									
Yates		Byrd & Frost, Inc.'s J. S. Jackson-Sun 1, ne ne sw H&GN Ry. 46, blk 11, 1 mi s by w of Wentz pool (Ellen).	9-28-45	1-18-46	1361	1220-1308	Yates sd; Perm	F 2.2 mln		Ant; geol	Not important.
		UPPER TEXAS COAST—New Oil Fields									
Jefferson		McCarthy O & G Corp.'s Tyrrell Tr. 3, 660 fr el 330 fr sl n½ sect 83, 1030.3-ac lse, W. C. Dunshie sur, ¾ mi e of dry hole 1.	11-26-45	2-14-46	10789	10160-10169	Hackberry sd; Olig	F 217; 0.2% wtr $\frac{11}{64}$"	39.6	D; seis	First Hackberry sd prod in Texas.
Matagorda	Midfields	Sun's Strnadel 2, 1320 fr s&el 325-ac lse, I&GN sur, 7, 933 nw Strnadel 1	10-20-45	1-15-46	9477	9127-9137	Frio sd; Olig	F 229; 0.1% wtr ⅛"	38.1	D; seis	Imp disc with good probable rec—near refineries, pipelines.
		UPPER TEXAS COAST—New Oil Pays									
Matagorda	Lucky	Stanolind's John E. Thompson 1, 1300 w alg sl, 660 n at ra, 588.48-ac tr (OWDD).		1-30-46	9700 otd 10248	10188-10205	Frio sd; Olig	F 52; 3.8 mln; $\frac{1}{32}$"	38.6	Ant; refl seis	
Matagorda	Sugar Valley	Superior of Calif.'s W. J. Culbertson 1, start n cor sect 84 go 330 ne alg sel sect 81, 330 nw at ra to lcn, 253-ac tr, P. Burnett-A.S. Sojourner sur.	11-22-45	2- 6-46	10662	8273-8290	Frio sd; Olig	F 256; 0.5% wtr 2.6 mln; ¼"	43.8	D; seis	
Newton	Sabine Tram	Humble's E. C. Hankamer et al 2, 113.1 fr nl 660 fr wl Shearley Goodwin sur, 2640 sse disc well, 6160-ac tr out of 42,210-ac lse.	11-18-45	1-17-46	8909	7997-8019	Cockfield sd; Eoc	F 141; 14% wtr; ⅛"	38.4	Flt; refl seis	2nd well in dist fld, 1st oil pay.
		UPPER TEXAS COAST—Oil Field Extension									
Ft. Bend	N. Thompson	T. S. Loffland s Annie E. Williams et al 1, 330 n of Brazos River, 335 e of el 20-ac lse on ne flk, T. Barnett Lge.	12-15-45	1-21-46	8154	7928-7960	Vicksburg sd; Olig	F 113; ⅛"	36.1	D; geol	Extends prod 2100 feet n.
		LOWER TEXAS COAST—New Oil Pay									
Nueces	Saxet	Richardson Pet. Co.'s L. G. Talbert 1, 467 s of nl 467 w of el 314.5-acs Russell Farms Trs.	12-27-45	2-11-46	7495	6655-6645	Frio sd; Mio	F 164.39; $\frac{6}{64}$"	38.6	Flt Ant; refl seis	Frio prod in Saxet fld extends from 5600 ft to 9900 ft. Probably another sd lense and not imp.
		LOWER TEXAS COAST—New Distillate Pay									
Hidalgo	Los Indios	Baldridge & King's W. L. Goldston 2, 3107 fr el 5750 fr sl 7358-ac lse, Sta. Anita gr, 5100 s sw of well 1 on same lse.	10-21-45	1-20-46	8449	6030-6058	Frio sd; Mio	F 75; 2.9 mln ¼"	53	Flt Ant; refl seis	Possible flt in Frio to trp gas at higher level than adj wells.
		SOUTHWEST TEXAS—New Oil Pay									
Starr	La Reforma	Baldridge & King's A. Guerra Est. 1, 1000 e of wl tr 7, 1135 s of Porter & Pickens' A. Guerra 1.	11- 8-45	2- 3-46	6150	6113-6150	Yegua sd; Eoc	F 146; ⅛"	42	Ant; refl seis	
		SOUTH CENTRAL TEXAS—New Oil Fields									
Atascosa		Quintana Pet. Corp.'s C. Muil 1, 2714 fr nel 5000 fr sel 1589-ac lse, J. C. Mattison sur, 467 (OWDD).	2-22-45	1-20-46	8865 otd 9105	8836-8936	U. Edwards li; L. Cre	F 100; 3.5 mln ¼"	48	Flt; seis	Abnd 8-45, PB and hole side tracked.
Bexar	Rosilla Crk	Harry S. Stahl's Pablo Verjeda 1, 1000 fr s & wl s 200-ac of 390-ac tr (blk 11) N. Montaya sur 21, 2 mi n Eckert fld.		2- 1-46	863	845- 850	Navarro sd; U. Cre	P 1½	38	Flt; refl seis	Unimportant—one of a series of flt traps.
		WEST VIRGINIA—New Gas Field									
Tucker		Ohio Oil Co.'s Kuykendall Unit 2, Dry Fork dist		2- -46	8404	8305-8404	Oriskany sd; Devo	F 3.77 mln			
		WYOMING—New Oil Field									
Fremont		Sinclair Wyoming Oil Co.'s DuBois Unit 1, ne 11-42n-107w, BuDois area		2- -46	3571	2073-2123	Embar li; Perm	Sw 94			Will stimulate exploration near se Border Yellow stone Nat'l. Park. Nrst prod is 50 mi.

[1] Character of producing formations abbreviated thus: ch, chalk; dolo, dolomite; li, limestone; sd, sandstone; sh, shale; ser, serpentine; cgl, congolmerate. Ages of formations abbreviated thus: Pleis, Plestocene; Plio, Pliocene; Mio, Miocene; Olig, Oligocene; Eoc, Eocene; U. Cre, Upper Cretaceous; L. Cre, Lower Cretaceous; Jur, Jurassic; Tri, Triassic; Perm, Permian; Penn, Pennsylvanian; U. Miss, Upper Mississippian; L. Miss, Lower Mississippian; Devo, Devonian; Sil, Silurian; Ord, Ordovician; Cam, Cambrian.
[2] Barrels of oil per day (24 hr. rate), flowing (F), pumping (P), swabbing (Sw), or bailing (B); or million cubic feet of gas daily open flow capacity; size of choke given in inches. [3] Type structure abbreviated as follows: Ant, Anticline; D, Dome; Fld, Fold or Folded; Flt, Fault or Faulted; M, Monocline; N, Nose; SD Salt Dome; Str trp, Startigraphic trap; Syn, Syncline; Ter, Terrace. [4] Method of discovery abbreviated as follows: cd, core drilling; dr, drilling; geol, geology; geop, geophysics; grv, gravity meter; ran dr, random drilling; seis seismograph; sub, subsurface geology; sur, surface geology.

Aerial Photography Aids Geologist

Aerial photography has brilliant future in geological discovery, both in wilderness and in areas explored by other methods

By FRANK A. MELTON, Professor in School of Geology
University of Oklahoma

THE geologist engaged in the study of aerial photographs will always want to use stereoscopic vision with contact prints. Stereoscopic study gives what may be called "the stereoscopic image or model" or more briefly, "the stereo-model," of a small portion of the earth's surface. The stereo-model is of greatest value in helping the geologist to evaluate topographic form, to estimate the strike and dip of bedding, and to recognize faults. While there is no doubt that the stereoscopic use of aerial photographs has its limitations, in most cases it will increase the geologist's usefulness and accuracy many times beyond what they would be, were he to use aerial contact prints singly, without the stereo-effect.

Nevertheless the value of the stereoscopic model in topographic mapping has probably been overestimated. For example, it is impossible by a strictly stereoscopic use of available photos, to recognize a level surface within ½ percent to 1 percent of slope without the use of bench marks. These percentages are the writer's estimates—they depend upon the quality of the lens, the amount of overlap, and the relief of the ground surface, not to mention the tilt of the camera axis and other factors. With suitable ground control much greater accuracy can be secured.

All students of aerial photos have noticed the concave, bowl-shaped aspect of the stereo-model produced by nearly all the available photographs. Photo engineers claim this is the result of inadequate lenses. Though sufficiently good lenses may have been designed, they are not yet in common use. For geological purposes aerial photos should not utilize the entire field of the lens unless it is understood that a considerable portion of each photograph must be cut off. By proper cutting a less-distorted central portion of each photograph may be made accessible for close study with a magnifying stereoscope. But unless the overlap has been planned to make this possible, certain parts of the photographed area may be lacking for closely detailed stereoscopic study. The best geological interpretation requires that only the central portion of photographs be used, and that the lens have relatively long focal length, 10 to 12 inches or even more if cost will permit.

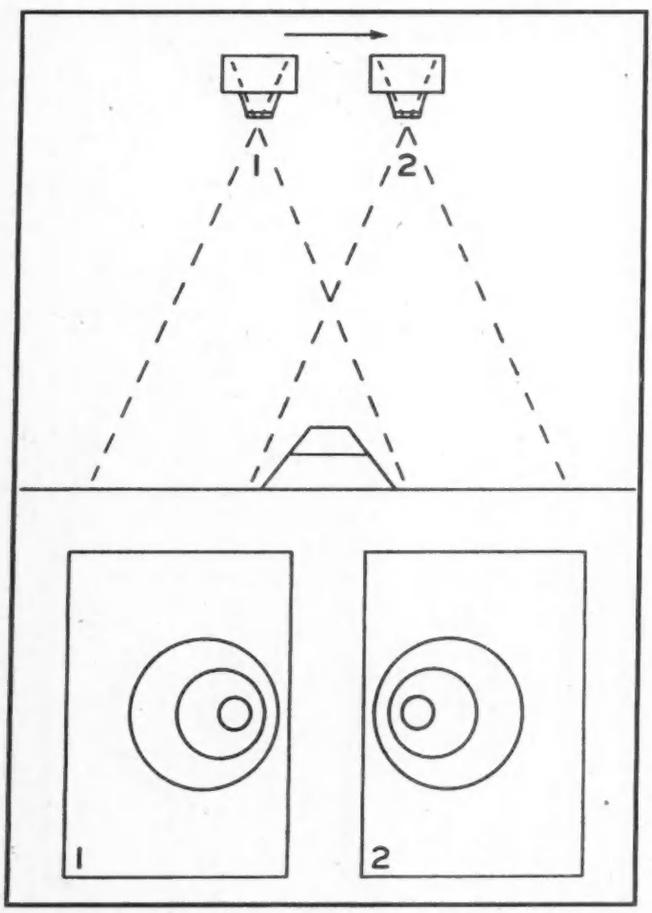


FIGURE 1

The correct relative position of a stereo-pair of aerial photographs to give the best possible stereoscopic model is a problem worthy of discussion. It has been stated in numerous textbooks and articles in photogrammetry, that the only "correct" orientation of contact prints for stereo-vision is the "line-of-centers" orientation. In this method, the observer places a stereo-pair of overlapping photos in such a position that the ground-images at center-points, together with the observer's eyes, fall in a single plane. In other words (if perfectly regular conditions be assumed, such as straight flying, freedom from tilt of camera axis, etc.), the "line of flight" on the photos and the eyes of the observer should fall in the same plane. This is general practice and is, indeed, the only satisfactory method to use in geologic interpretation or other types of map work with stereoscopic pairs of aerial photos.

However, it should be pointed out that so far as the stereoscopic image or model alone is concerned, the "line of centers" or (under ideal conditions) the "line of flight" may be disregarded. Figures 1 and 2 illustrate the "distortion of the perspective" which is under discussion. Figure 1 shows the geometric relationships of the perspective of a symmetrical flat-topped conical hill marked by contours at the top, middle, and base. If the hill lies in the marginal area of two consecutive vertical photos, its photographic images on the contact prints will be asymmetrical because of the perspective or obliquity at the margin.

Figure 2 illustrates the sequence of changes in stereoscopic and non-stereoscopic, though binocular, vision of this ideal stereo-pair, as each print of the pair is rotated toward the right under binocular vision with suitable streoscopic instruments. Comments accompanying Figure 2 clarify the diagrams.

To repeat for emphasis: "Distorting the perspective" of a stereo-pair, by rotating both photos for toward the left and toward the right, does not noticeably distort the stereoscopic model. Nevertheless, for reasons of uniform and rapid handling of photos as well as easy perception of the stereoscopic image, the customary orientation of aerial photos is best.[1]

Causes of Distortion

Some of the chief factors which cause noticeable distortion of the stereoscopic model are the following:

a. Bending of either contact print while under stereoscopic observation.

b. Moving the line of sight away from a position perpendicular to the prints. Such changing of the line of sight results in "weaving topography." A horizontal surface will appear to tip one

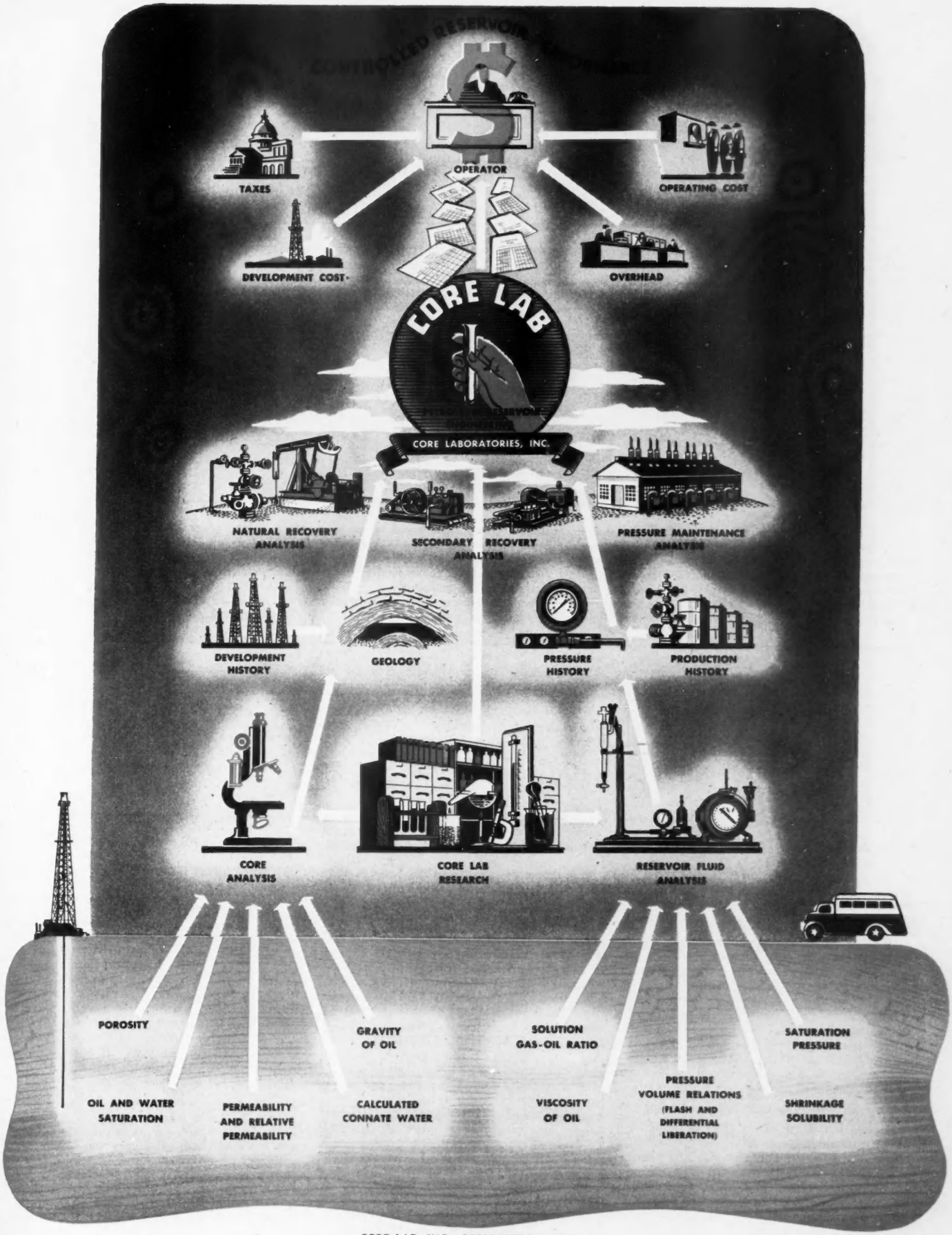


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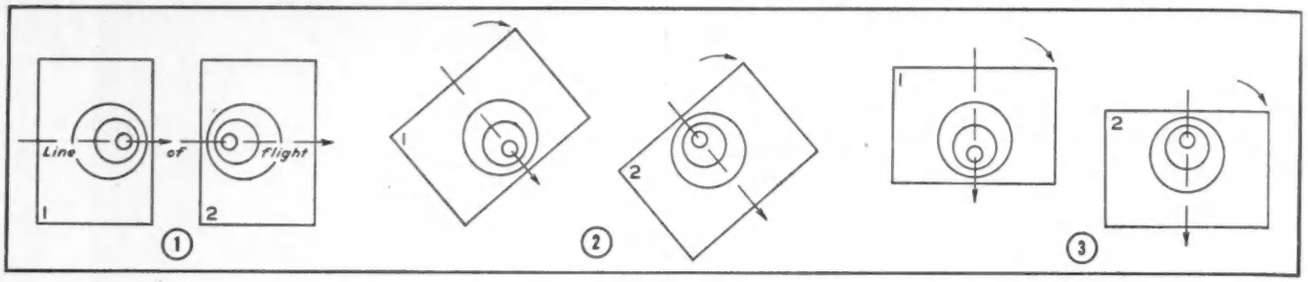
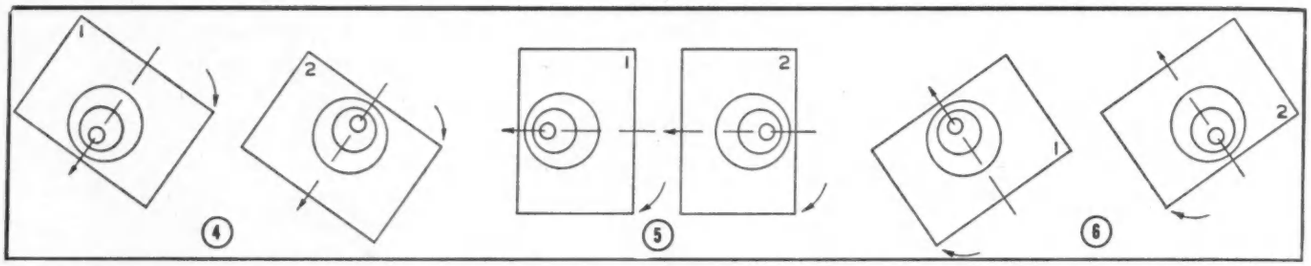
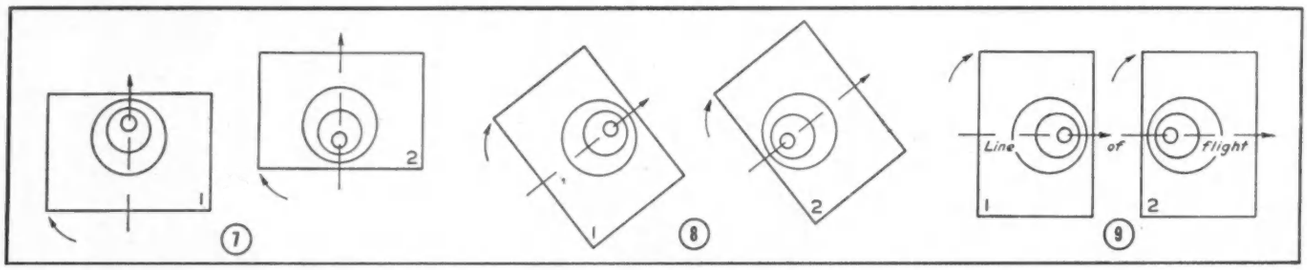
Figure 2—Sequence of changes in stereoscopic and non-stereoscopic vision as prints are rotated



1. Relative position of the ideal stereo-pair for stereoscopic vision with normal relief. This is the correct position for stereoscopic work, but not the only position.
2. The stereoscopic image begins to disappear for most observers between 30° and 60° of rotation toward the right or left.
3. With 90° rotation the stereoscopic image can not be seen but a "pseudo-stereoscopic" image is clear and distinct. In other words a clear picture is visible but there is no stereoscopic relief. This is one of two positions of "extinction" for the stereoscopic image. See Diagram 7.



4. With further rotation to 135° ± 15° from the starting position a stereoscopic model begins to appear in reverse relief. This is one of the limiting positions for stereoscopic vision with reversed relief. The other limit is the position 225° ± 15°. See Diagram 6.
5. The rotation is 180°. This is the optimum position for stereoscopic vision with reversed relief. It is the direct opposite, both in orientation and perception, of the correct position for stereoscopic vision with normal relief shown in Diagram 1. Reverse relief is as easily seen by an experienced observer as normal relief; it is, in fact, on rare occasions useful to the geologist.
6. With further rotation to 225° ± 15° from the starting position, stereoscopic vision with reversed relief begins to disappear. This is one of the limiting positions for stereo-vision with reversed relief. The other limit is the position 135° ± 15°. See Diagram 4.



7. The rotation is 270°. This is one of the two positions of "extinction" for the steroscopic image and for the appearance of the pseudo-stereoscopic image. See Diagram 3.
8. The stereoscopic image with normal relief begins to reappear for most observers between 30° and 60° to the left of the starting position. This is 315° ± 15° of rotation toward the right and 45° ± 15° of rotation toward the left of the starting point.
9. The starting position. See Diagram 1.

way or another as one moves his head in translation in any direction.

c. Imperfections in lenses which cause the distortion of the photo-image.

d. Tilt of the axis of the camera away from the vertical position in one print of a stereo-pair may possibly distort the stereoscopic image if the angle of tilt is large. However if the tilt is only a few degrees, even an experienced observer will not see any noteworthy distortion.

The Shadow Effect

It is a common belief that in viewing aerial photographs of hilly country, those hillsides in the sun-shadow must be oriented so that the sun appears to be above the observer's head. Failure to do this when one is viewing a single photo may lead inexperienced observers to "sense" the topography in reverse. more rarely it may cause the beginner when viewing a stereo-pair, to see even the stereoscopic image in reverse. However, those accustomed to using aerial photos will soon discover that, except in extremely rugged topography, the direction of the sun-shadow makes no appreciable difference. In fact, the full-time student of aerial photos, for ready comparison with maps, must frequently study them with the north direction "up" regardless of the direction of sun-shadows.

The vegetal growth on the protected north-facing hillsides (the "vegetal sun-shadow") because they appear as dark areas, act much as a true sun-shadow in their effect on aerial photo study.

Photo-Indexes

In the "plains" country, where the relief is low, photo-index sheets are good picture maps, and show a wealth of detail which is useful in many ways. Large structures in thick formations are clearly visible. On the other hand, stereoscopic vision is not possible with them and some detail is always lost in photographing and printing these sheets. In country of high relief, such as is found in most mountain ranges and in plateaus, the contact prints from the flight negatives cannot be matched well enough to construct index sheets which are usable by geologists. Where relief is one-tenth to one-third of the camera height above the ground, the distortions due to relief are very great.

The discontinuities of photographic image, of tone, and of scale are a drawback in the use of photo-indexes. Yet since these discontinuities are perfectly obvious and uncamouflaged, the photo-index is in some respects safer to use than in the mosaic in which the arts of concealment must be employed. Good photo-index sheets of low "stratabench-lands" and true coastal-plain country are useful in geological exploration in pro-

■ CONTINUED ON PAGE 65

Function and Use of Petroleum Engineering Committees

Part 1

By D. V. CARTER
Chief Petroleum Engineer, Magnolia Petroleum Company, Dallas

WITHIN the past several decades those of us engaged in the exploration and operating phase of the oil and gas business have witnessed practically a complete change in what was commonly accepted as the proper operation of oil and gas reservoirs.

What has caused this change of operating concept? The explanation is simple . . . the application of technology[1] made possible largely by factual data. We have come to recognize the fundamental differences of several types of oil and gas reservoirs and the source of energy in each case.[2] Working in harmony with nature through an understanding of natural physical laws actually amounts to following "the line of least resistance."

We have finally come to realize that multiple surface ownership of common oil and gas reservoirs requires constructive and concerted operating action. As more and more operators become awakened to the fact that they are producing from common reservoirs, and that they can work together for their mutual benefit, petroleum engineering committees are being accepted. The organization of committees is generally undertaken by far-sighted individuals who recognize them as the logical means of providing a basis of common knowledge for cooperative effort at reasonable cost by avoiding repetition. It is as simple as this. It is a solution to the problem which is a fact that we cannot, at least as yet. "build fences" around the recoverable hydrocarbons and reservoir energy to each leasehold.

Factual Data Vital

In order for this to become a reality . . . the collection of adequate factual data is necessary. The mutual and appropriate application of this information means that we are considerably on our journey toward an accepted common ground on which to base a study and discussion for meeting operating problems. For example, these operating problems may require for their solution unitization for effecting operating economies or for the purpose of supplementing reservoir energy by water, gas or air injection. Or possibly a cooperative plan or an operators' meeting to discuss and consider changes in regulatory body field rules and regulations is all that is needed. Factual data are indispensable for all manner of reservoir studies and operating problems, not the least of which are reserve studies of a periodic nature or possibly valuation studies for purchase or sale of properties. Many of us have experienced the discovery that the solution of what appears to be a complex problem has a fairly simple explanation. Factual data are the principal constituents of an understanding.

It is surprising how factual data when collected and properly organized and presented will in themselves clarify some situations and make obvious some of those matters needing attention. Thus factual data may be likened unto mortar for the bonding of brick—if we consider the brick as the operators. What is the result? The gradual disappearance of the "chip on the shoulder" type of operator often closely allied and confused with the so-called "rugged individualist."

Within certain recognized limits experienced engineers using the same set of basic factual data are not only more likely to be in agreement regarding a given problem but will probably also recognize inherent trends and possibly the need for further investigation. Factual data provide a basis for and foster voluntary discussion of many operating problems, possibly of less calibre than unitization or a cooperative plan for reservoir operation.

The meaning of factual data is simple. It includes all factors relating to changes as the result of fluid withdrawal from the reservoir, analyses of reservoir fluids, necessary factual geology, and statistics with reference to wells drilled and abandoned. Factual data constitute the primary objective of fact-finding petroleum engineering committees, whether they be on a field, area or statewide basis.

Petroleum engineering committees are winning wider recognition as operators recognize the benefits of cooperation

Historical Review

I would like to make the observation that from away back yonder—in fact, even as nearly as only 13 years after Drake officially started this oil business, numerous and cyclical crises[3] have beset the industry. These crises in the drilling, producing, purchase and transportation phases of the industry are liberally sprinkled with economic troubles of a "feast or famine" nature. This is particularly true with reference to the availability and price of crude oil.[4]

Rampant monopolistic accustations and the titanic struggle for survival and maneuvering for position on the part of producing and other elements characterized the industry in the period 1859 to the early 1900's. During this interval, the industry was endeavoring to emerge from the formative stage and attain further growth with some degree of maturity. Even in the 70's, a search of the literature reveals[6] that producers in the Clarion and Butler fields, Pennsylvania, were discussing among themselves plans for combatting the economic peaks which were the direct result of rate of field discoveries, market demand and the machinations of the purchaser, transporter and refiner.

Similar situations of over-production, market demand, price and transportation difficulties continued to plague the industry, e.g. Illinois[6] 1906-1910, Cushing[7] 1912, Healdton[8] 1914, the fields of the Greater Seminole Area[9,10] 1927, and Oklahoma City,[11] Oklahoma, 1931.

Meanwhile, let us see what the effect and the relationship of these events were with respect to cooperative fact-producing petroleum engineering committees:

The Greater Seminole Area, Oklahoma, development starting in 1926 was the first instance of operators voluntarily employing an umpire[12] to effectuate a degree of ratable take among the producing factions. These few attempts on the part of the operators to approach some degree of production allocation were relatively mild and of comparatively short duration. This action was premised on the proposition of overproduction with respect to market demand and outlet, and with a dash of hope that some conservation benefit would be derived together with a somewhat lessened need for above-ground storage.

Again, a similar situation of overproduction occurred in the Yates field,[13]

From a paper delivered before a joint meeting of the Illinois Society of Petroleum Engineers and the Illinois Basin Chapter of the American Petroleum Institute, Mt. Vernon, Ill., March 1, 1946.

Recapitulation of Petroleum Engineering Committees*

COMMITTEE†	State	Date Organized	Geographic Scope	Articles of Organization or Agreement	Paid Engineer, Chairman or Director	General Organization	Purpose
Yates Pool Engineering Committee	Texas (West)	1928	Field	Yes	Yes (Chairman)	General Committee	Collect and disseminate factual data.
Conroe Field Engineering Committee	Texas (Gulf Coast)	3-11-33	Field	Yes	Yes (Chairman)	Senior Com., Field Com.	Promote conservation and collect and disseminate factual data.
East Texas Engineering Association	Texas (East)	8- 4-33	Field	Yes	Yes (Field Engineer)	Gen. Com., Field Com.	Collect and disseminate factual data.
Judkins Pool Engineering Committee	Texas (West)	1934	Field	None	None	Informal Eng. Com.	Collect and disseminate factual data.
Goldsmith Pool Engineering Committee	Texas (West)	1-25-37	Field	Yes	Yes (Chief Engineer)	Gen. Com., Exec. Com.	Conduct reservoir pressure surveys, collect and disseminate factual data.
‡Rodessa Engineering Committee	Texas, Louisiana, Arkansas	1937 (Disbanded 1944)	Field	None	None	General Committee	Collect and disseminate factual data.
‖North Basin Pools Engineering Committee	Texas (West)	3- 1-39	Area (10 Fields)	Yes	Yes (Chairman)	Eng. Com., Advis. Subcom., Operators Com.	Conduct reservior pressure surveys, collect and disseminate factual data.
Fullerton Engineering Committee	Texas (West)	11-15-44	Field	None	None	Engineering Committee	Collect and disseminate factual data.
Carthage Field Engineering Committee	Texas (East)	3- 7-45	Field	Yes	Yes (Director)	Gen. Com., Exec. Com.	Collect and disseminate factual data.
La Gloria Field Oil and Gas Engineering Committee	Texas (South)	7-19-45	Field	Yes	None	Engineering Committee	Collect, correlate and analyze factual data and recommend conservation practice.
Seeligson Engineering Committee	Texas (South)	12-14-43	Field	None(Not Approved as yet)	None	Engineering Committee	Collect and disseminate factual data and make recommendation.
Lea County Engineering Committee	New Mexico (Southeast)	7-10-30	Area	Yes	Yes (Umprie)	Gen. Com., Exec. Com., Field Eng. Com.	Collect and disseminate factual data.
Conservation Committee of California Oil Producers	California (all)	1929	State	Yes	Yes (Manager)	Gen. Com., Admin. Subcom., Eng. Subcom. 27 Dist. Coms., 27 Field Eng. Coms.	Allocate production for all fields on basis of maximum efficient rate. Distribute factual data.
West Edmond Engineering Association	Oklahoma (North Central)	5-16-44	Field	Yes	Yes (Chairman)	Gen. Com., Advis. Eng. Subcommittee	Collect and disseminate factual data.
Mississippi Oil and Gas Engineering Committee	Mississippi (all)	1-12-45	State	Yes	Yes (Director)	Gen. Com., Advis. Com.	Collect and disseminate factual data.
Holly Ridge Engineering Committee	Louisiana (East)	3-16-45	Field	None	None	General Committee	Collect and disseminate factual data.
Rangely Engineering Committee	Colorado (Northwest)	§	Field	None	Yes (Chairman)	General Committee	§
‡Arkansas Operators Committee	Arkansas (all)	Nov. 1937 (Disbanded 4-1-39)	State	None	None (Administered by State Board of Conservation)	General Committee	Recommended drilling and production policies.

* Chart lists only those committees among whose functions are the collection and dissemination of factual data.
† The Engineering Subcommittee of the Lance Creek Field, Wyoming, has been omitted for the reason that the major portion of the field is unitized.
James D. Anderson, Division Engineer, Ohio Oil Co., Casper, Wyoming—Personal communication.
W. T. Nightingale, Vice-President, Mountain Fuel Supply Co., Rock Springs, Wyoming—Personal communication.
‡ Committee has been disbanded. ‖ The North Basin Pools Engineering Committee embraces the following fields: Seminole, Russell, Wasson, Wasson "66", Wasson "72," Waples-Platter, Owenby, Dean, Slaughter and Levelland. § Information not available.

West Texas. This field, discovered in 1926, had developed a potential production of such magnitude two years later that it demanded an immediate solution. The operators organized a committee[14] and some of the operators signed an agreement effective October 1, 1927, for the primary purpose of allocating the production of oil between the various leaseholds in this field. The functions of this committee have expanded to include the gathering of factual data and it has become a full fledged petroleum engineering committee. This Yates Pool Committee,[15] as finally evolved in 1928, developed into the first field cooperative petroleum engineering committee in Texas and the United States.

East Texas Discovery

These troubled conditions appeared from time to time until the early 30's. Then came the discovery of the East Texas field, which pulled the cork on available oil and brought the matter of conservation up sharply as a problem to be solved by the industry and several of the state regulatory bodies. Actually, the over-production problem, at this time, was of such importance that it rightfully concerned all legislatures and regulatory bodies of oil producing states, but some reneged.

The industry and the Texas Railroad Commission, the Oil and Gas regulatory body of Texas, bore the brunt of this problem. The problem was solved by several of the state regulatory authorities with the aid of numerous court tests.

Thus a betterment resulted for the handling of such matters after the formidable problem caused by the discovery of the East Texas field in late 1930, which was preceded by similar important crises from the discovery of the Greater Seminole Area, the Yates and Oklahoma City fields. Backing up a few years, we can now see that the dissolution of the Standard Oil Company in 1911, to the disappointment of some, did not effect for the better or diminish, necessarily, these recurring economic spasms.

The Yates Committee was followed in 1933 by the organization of the Conroe Field Engineering Committee,[16] a subcommittee of the Association of Conroe Operators Land and Royalty Owners. In the same year, the East Texas Engineering Association was formed.

The first area engineering committee organized was the Lea County Engineering Committee, an outgrowth of the Hobbs Operators Agreement,[17,18] dated July 10, 1930. The second area committee was the North Basin Pools Engineering Committee,[19] organized in March, 1939. The North Basin Committee includes many of the larger pools of the West Texas Permian Basin.

The oil industry in the State of California has a rather unique situation. It is the only major oil producing state without proration laws. A voluntary restriction of oil and gas withdrawal rates is engaged in under a state "conservation" program. The statewide organization known as the "Conservation Committee of California Oil Producers"[20] together with its predecessor organizations has been performing continuously since the fall of 1929. This is the first statewide cooperative engineering committee in the United States.

The re-occurrence of development activity in Arkansas in early 1937 witnessed the formation of a statewide cooperative engineering plan. The operators organized the "Arkansas Operators Committee"[21] which was administered by the State Board of Conservation. This was the second statewide-cooperative committee. The committee recommended well spacing, drilling and production policies. The committee functioned until the passage of appropriate state legislation in February 20, 1939,[22] which cre-

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ated the present Arkansas Oil and Gas Commission effective April 1, 1939.

The third statewide engineering committee is the Mississippi Oil and Gas Engineering Committee, organized January 12, 1945. This Mississippi Committee is the first statewide organization whose sole purpose is the collection and dissemination of factual data.

A better understanding of the mechanics of oil and gas reservoirs through the gradual application of technology, legislative help and clarifying aid from the courts, paved the way to a better realization of the general problem of conservation. The term conservation is here used in the broadest sense. State regulatory bodies took further steps to regulate on the grounds of conservation after their authority had been sufficiently measured, although it was crystallized to a greater extend by 1939.

To illustrate how far we have come in 20 years: Many of you can remember before the advent of applied technology that when someone desired data other than ordinary production statistics for all or part of a field, he was looked upon by many well-meaning people in authority as one "too big for his britches" and was mentally catalogued by them as being "nosey." This attitude was due, obviously, to a lack of understanding of the application of technology. Another classic example of lack of understanding is the fact that it was not the custom to tube flowing oil wells before completion. It was literally a major victory to obtain permission to "run tubing" in a well before completing. Then the East Texas field was discovered and the use of tubing in wells was made mandatory. This practice spread throughout Texas and several other states. It is now accepted without question, and so it goes.

What is the connection between all of this and fact-producing petroleum engineering committees? Simply this—technology and its application to the oil and gas business requires technical data. Since this type of committee offers the most practical and logical way to obtain the desired data, their initiation was inevitable. The need for engineering committees was accelerated by the occurrence of problems of such magnitude as to be too difficult and inherently impossible of solution on the part of individuals, companies or groups within the industry. In addition, a remedy sought must fulfill the necessary legal, technical and economic requirements. Thus, after much groping we have an instrumentality and a better understanding among ourselves to permit us not only to better attack problems, but also to improve our concept of what constitutes good operation. So you see, the birth of such committees for the production of technical facts could not be avoided. They have come to be indispensable. They are here to stay.

To show the importance and extent to which this type of committee has grown: I estimate that at the beginning of 1945 for the states in which they operate, except Colorado, namely Texas, California, Oklahoma, Louisiana, New Mexico and Mississippi, 48 percent of the crude oil and condensate reserves in these states shows evidence of the application of scientific producing methods. It is also of interest that I estimate 43 percent of oil and condensate reserves of the United States shows effects of petroleum engineering.

Later on, the scope of activities of these committees will be discussed; how they differ and what legal domains they occupy.

Organization, Scope and Legal Aspects

At this juncture it may be well to define a petroleum engineering committee. Generally speaking, it is an organization composed of technical representatives of operators working together for the purpose of gathering, pooling, and distributing factual data to provide a common basis for the understanding of mutual problems. In actual cases, various committees are modified to some extent, but all adhere to the one basic purpose of obtaining factual data.

Most of the petroleum engineering committees subscribe to the simple basic structural form exemplified by the Misissippi Oil and Gas Engineering Committee, which also sets a pattern for future statewide committees. The organization consists of three essential parts: a general committee, an executive committee and a full-time, paid director and his staff. The general committee is composed of one technical representative from each participating operator, such representative being either a technically trained man or engaged in a supervisory capacity in petroleum production. A general committee chairman, a vice chairman and a secretary-treasurer are elected from the membership to serve for a term of one year. I had the honor of being elected general chairman for the first year.

The executive committee consists of seven members elected from the general committee with the stipulation that all should, if possible, be residents of the state of Mississippi, and at least five of the members be representatives of oil or gas producers in the state. The executive committee elects its own chairman and secretary.

The full-time, paid director is chosen by the general committee. The staff is selected and matters of policy are acted upon by the director, the executive committee and the general officers.

The general engineering committee passes on all matters of broad interest brought before it. It should be emphasized here that each participating operator is allowed only one vote in committee affairs, regardless of the magnitude of his operations in the state. The executive committee assists the director in the activities of the organization and passes on all expenditures over $500. The staff, under supervision of the director, maintains records of factual data for all fields.

Committee equipment and personnel are used, if necessary, to run reservoir pressure tests, gas measurements, echometer tests, salt water gauging and other tests. When the occasion arises, a special field engineering committee for a particular field can be appointed by the director with approval of the executive committee.

The Mississippi committee publishes a quarterly report of factual data in which is presented up to date development maps and all available information for each field, including graphic reservoir histories. The material is complete enough to permit the evaluation of reserves and to make other important studies.

Between factual data reports, a monthly Interim Statistical Bulletin is published furnishing up-to-date production data and all available information on new wells and developments. In other words, these two reports comprise a valuable current and cumulative engineering survey of each field.

I would like to emphasize here that neither the director nor any member is allowed to speak for the committee, although each may make his own personal comments. Hence, no recommendations are made by the director or his staff; interpretation of the data is left to the operator. The circulation and use of the data is restricted to the committee membership and to the supervisor of the State Oil and Gas Board of Mississippi, who is an ex-officio member of the committee. Private enterprise is thus doing that which would sooner or later be done by governmental bureaus financed by taxpayers.

Membership Cost

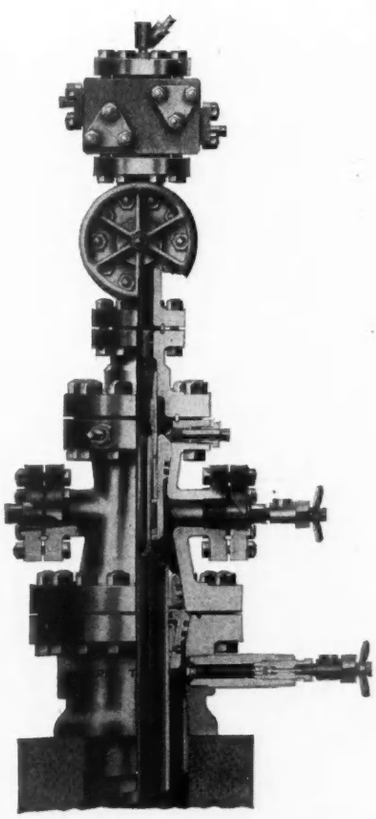
The cost of membership is small. There is an annual fee of $100 for each member plus an additional monthly assessment to members having oil and gas production in the state. The assessment is made on a per barrel basis determined by each member's percentage of the total state production for all participating members. This monthly assessment has now been reduced to approximately 2 mills per barrel. The articles of this committee also provide with reference to the assessment of gas: "The inclusion of gas production in the expense of this organization is to be made on an equalized value basis to be formulated by the executive committee when gas production is secured from new pools."

As now constituted the functions of the "Conservation Committee of California Oil Producers"[23, 24, 25] is primarily to determine the maximum efficient rates of production (M.E.R.) for the various pools based upon reservoir engineering studies and evaluation of their performance record. Another function is to make recommendations to the operators for the distribution of production to individual wells in accordance with best engineering practice considering property equities.

The Conservation Committee distributes monthly schedules to the individual operators for each flush and semi-flush pool as well as statements of production on a well by well basis. Summaries of monthly pool total and company field production are published on a statewide basis and made generally available. The committee's paid staff secures from the companies complete records on a well, lease and pool basis for production of oil, water and gas. These data include copies of the regular monthly production report filed with the California State Mining Bureau, Division of Oil and Gas. These records are augmented by reports from purchasers for oil shipped and producers' reports on storage and lease use of crude. Well completion reports covering coring records, perforations, zone encountered and other data are also submitted.

The committee has a paid manager and his staff. The work is reported to two subcommittees: the administrative and the engineering subcommittees. The state is divided into 27 districts, each with a district committee and a field engineering committee. Whenever it is decided to investigate a field problem either through desire of the committee or by petition of an operator, two special

SIMPLICITY is the first requisite of well control



Look for the strains that aren't there!

Check the history of trouble in the completion of high pressure oil and gas wells, and you'll find that the elimination of excessive strains would have avoided much of the trouble. A large valve combatting the loads of large pressure subject areas leaked. The bonnet flange gasket on a large valve blew out. Weaker packing materials were unable to withstand the long life demanded of them, and disintegrated. The lever arm exerted stresses that broke the weld when the welding flange was tightened down by the studs. The welding of heavy welding flanges to light sections of pipe caused a break.

Those who have accomplished the improvements of the past made mistakes, and tried again. Having made mistakes proves the virtue of having tried, but repetition of errors is folly. To avoid repetition, a designer must have full knowledge of the history preceding his efforts.

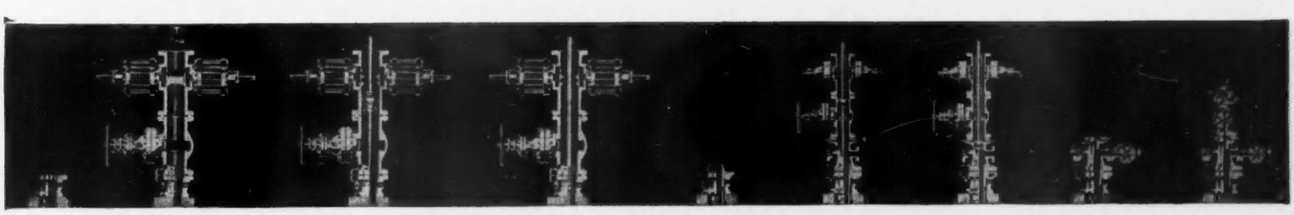
Gray Systems of Well Control are based on the fundamental principle that simplicity is the first requisite of safety. Simplicity evolves from the reducing of pressure subject areas, the elimination of lever arms, avoiding the use of weaker materials which require additional parts to support them, removing with control from the permanent structure parts which have completed their control function, and generally practicing the principle of "more strength with less weight." The reduction of pressure subject areas has contributed immeasurably to simplicity through decreasing strains, permits the use of less material and smaller sized valves, fittings and other accessory equipment. In Gray Systems of Well Control, elements that increase the load have been eliminated, and the strain, or load, or pounds of pressure exerted, are reduced in many cases as much as 50 per cent.

The whole is greater than any of its parts. Look for the strains that aren't there!

GRAY
TOOL COMPANY
HOUSTON

Export Representative: GUY E. DANIELS, 30 Rockefeller Plaza, New York City

CONTROL DURING AND BETWEEN ALL OPERATIONS WITH GRAY PLANNED PROCEDURE



Casing Head Attached | Drilling | Running Casing | Casing Landed | Drilling Control Equipment Removed | Drilling-in and Running Tubing | Tubing Landed | Control Equipment Removed | Manifold Attached

study committees are appointed: two pool engineering committee and the pool operators committee. The pool engineering committee consists of qualified operators' representatives directly interested in the problem who collect the necessary data and prepare a report including recommendations. The report is sent to the pool operators committee, the conservation engineering subcommittee and to the manager, all under confidential seal. The manager places it before the proper subcommittee for action. The members of all committees, except for the manager and his staff, are employe representatives of the operators.

The acceptance of this program in California has been largely attributed to "self-selling." There is a growing realization on the part of the operators themselves that they will ultimately benefit both from higher oil recoveries and reduced operating costs. This consciousness is largely a result of education and enhanced knowledge relative to the conditions in the oil pool under study. Knowledge of their problem is to a large measure acquired out of the coordinated work of their field engineering committees. The factual data developed are the basis of sound engineering judgment and joint operator action in support thereof. The active participation by the company engineers in jointly studying reservoir behavior on a pool basis and making recommendations for improved produuction practice has in a large measure been responsible for the high degree of compliance with the voluntary program in California.

It is certainly commendable of the operators in the state of California that they have been able to maintain a reasonably effective control of such a difficult problem as "proration" on a voluntary basis. To me it shows that knowledge and understanding of a common problem and a neighbor's position tend to dispel distrust and promote cooperation.

State Supervisor

Under California law for the conservation of petroleum and gas the state maintains an oil and gas supervisor. He directs the work of the Division of Oil and Gas of the State Mining Bureau.[26] There are six districts with a deputy in charge of each. The primary work of this department is to control well completion practices, particularly to exclude water from petroleum reservoirs, as well as to prevent oil or gas contamination of water supplies. Venting of gas to the air is prohibited, and this provision is closely adhered to. Stress is made to avoid any surface waste, and, in general, California companies utilize within practical operating limits the entire production of gas from oil wells. This, in part, is due to a condition of low gas reserves and high demand on the Pacific Coast.

The Division of Oil and Gas functions also include but are not limited to the following:

1. Maintenance of records of well and property ownership.
2. Maintenance of records of notices of intention to drill new wells and redrill old wells.
3. Supervision of well abandonment.
4. Securing and maintenance of monthly statements of production of oil, gas and water by wells and property totals.

An example of an efficient area engineering committee is the North Basin Pool Engineering Committee[27] under the chairmanship of V. E. Cottingham. This committee, established March 1, 1939, has under its jurisdiction ten fields in the north end of the Permian Basin area, including such large fields as Slaughter, Seminole and Wasson. The structure of the committee compares favorably with that of the Mississippi committee, having the same essential sections; that is: a general engineering committee, an advisory subcommittee and a full-time, paid chairman and his staff. In addition, an operators committee is also included whose members are not necessarily technical men.

The staff, under supervision of the chairman, conducts reservoir pressure tests with committee equipment, assembles gas-oil ratio data and witnesses potential tests of wells. The North Basin Committee differs markedly from the Mississippi committee in that operating recommendations in keeping with sound conservation practice are made by the chairman. By contrast, as previously mentioned, the Mississippi committee director cannot make any recommendations in an official capacity.

An anual report and monthly statistical bulletin are distributed by the North Basin Committee, containing production data, potential tests, reservoir pressure and gas-oil ratio surveys. These bulletins, of course, are restricted to the committee membership.

Field Committees

There are many individual field engineering committees of which a typical example is the Goldsmith Pool Engineering Committee of West Texas. The Goldsmith field was discovered in 1934 and a formal engineering committee was established by the operators January 25, 1937. Here again the same fundamental organizational pattern is employed as is found in the Mississippi and the North Basin Committees: a general engineering committee, an executive committee and a full-time, paid chief engineer and his staff. The duties of the chief engineer and staff of the Goldsmith committee are very similar to those of the North Basin Committee. Under supervision of the chief engineer, the staff conducts reservoir pressure tests and witnesses gas-oil ratio surveys and potential tests. The chief engineer also recommends prudent operating practice based on a sound conservation policy. A monthly statistical report containing the results of gas-oil ratio and reservoir pressure surveys and production data is distributed to the member operators in the field.

A number of modified forms of engineering committees have come into being from time to time to serve various purposes. Special study groups have been appointed in many fields to investigate particular problems; in some cases consulting engineers are employed. At the present time special engineering study committees are working in the Vacuum and Lovington fields of Southeast New Mexico, and the Fullerton, Slaughter and Seminole fields of West Texas. Cooperative investigations are also under way in the Piedre Lumbre, Heyser and Seeligson fields of South Texas and in the Elk Basin field of Wyoming.

Another cooperative instrumentality that is used is the repressuring agreement. Here the operators band together to re-energize the field although oil production operations are conducted on the usual freely competitive basis. The K.M.A. Pressure Maintenance Association and the West Pampa Repressuring Association characterize this style of organization. The step beyond this, of course, is full unitization in which the entire property operation is managed by an association such as the Haynesville-Pettit and Cotton Valley Units in Northern Louisiana and Southern Arkansas.

Perhaps the simplest type of engineering committee for gathering factual data is one where the operators have agreed to exchange information, but do not go through the formality of signing articles of organization or employing an engineer to conduct the affairs of the committee. The Judkins Pool Engineering Committee[28] (Penwell field) in West Texas is such a group. An annual report of factual data is distributed to the member operators.

A committee may formally adopt articles of organization, but not employ a full-time engineer-chairman or director. In this case the chairmanship is voted to a member of the committee who does not receive any extra compensation from the organization. The Fullerton Engineering Committee and the La Gloria Engineering Committee follow such a pattern.

Let us discuss for a bit the differences and advantages of statewide engineering committees as compared to other area committees, using Mississippi as an example. The principal points to consider are:

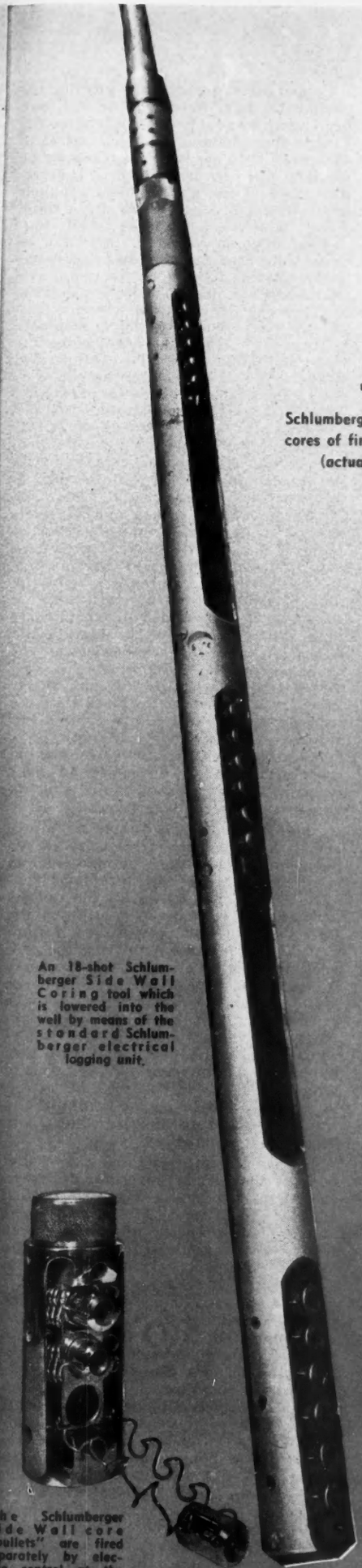
1. Statewide advantages.
2. Economy of operation.
3. Uniformity and completeness of reports.
4. Prestige, recognition and education.

Perhaps the greatest advantage of a statewide committee is the unanimity of objective, especially in obtaining factual data. The true value of each field in the over-all picture is less likely to become distorted. A statewide committee is in a better position to be of service to all member operators.

The principle of mass production seems to be an integral part of our modern day life, and, of course, there is no reason why it will not work in obtaining engineering information; in fact it can be applied. Management is constantly faced with the problem of operating costs. In this regard the member operators welcomed the opportunity to participate in the Mississippi Engineering Committee activities as a means of reducing operating expenses by utilizing the service offered by the committee. It relieves the necessity of company engineers and other employes duplicating the efforts of others. Of greater importance, it permits the engineer to "engineer" instead of collecting data. The general system of individual company data collecting can never be considered as efficient, as it is often impossible to get a composite picture and reliable yardsticks of the fields. Hence, the old wolf cry of "increased operating cost" when applied to committee membership is unfounded and based on ignorance of the facts.

Value of Data History

Why is it necessary to collect factual data early in the life of each reservoir?



An 18-shot Schlumberger Side Wall Coring tool which is lowered into the well by means of the standard Schlumberger electrical logging unit.

The Schlumberger Side Wall core "bullets" are fired separately by electric control at the surface.

Schlumberger side wall cores of firm oil sands (actual size).

SCHLUMBERGER SIDE WALL CORING Is Fast, Inexpensive Reliable

Let it help you solve these problems:

1. **Obtaining, during drilling operations, cores of formations from which mechanical coring has yielded poor recovery.**
2. **Supplementing the indications of the "Schlumberger" in zones which were not mechanically cored. It provides an excellent means of differentiating between fresh water, calcareous, silty or fimey sands and oil sands.**
3. **Determining the exact location of the gas-oil or oil-water contact by obtaining a series of samples at intervals of one foot or less.**
4. **Obtaining cores from shale sections for paleontological studies.**

SCHLUMBERGER WELL SURVEYING CORP.

HOUSTON, TEXAS

Because a reservoir is a dynamic thing: it is constantly changing as fluids are withdrawn. Consequently, data must be obtained periodically and analyzed in order to accurately predict future behavior, and, if need be, change the mode of operation. Often, small special engineering or geological committees are appointed by field operators for the purpose of making an intense, single objective report on the feasibility of unitization or the installation of a water flood or gas injection project for increasing the ultimate recovery and production rate of a field. Or perhaps the study will provide the basis of fieldwide long-term gas sale contracts or the building of a plant for utilizing and processing gas for liquid products. In any regard, it is quite obvious that a factual data history of the field minimizes assumptions and is the only foundation upon which miscellaneous information can be coordinated and a sound study based. If such data are not available a substitute is frequently invented. In fact, large expenditures are often made upon recommendations based on nothing more substantial than a vivid imagination.

Uniformity and coordinated effort are essential in acquiring reservoir data. A momentary consideration will make this quite apparent. Considering the constantly changing conditions in a reservoir as fluids are withdrawn, it seems very illogical to assume that data such as reservoir pressures, taken in only one section of a reservoir, can be coordinated and used with data taken some time later in another section of the same reservoir. Yet, this is exactly what is being done in many fields where operators have agreed to exchange information, but do not coordinate their efforts. Another advantage of uniformity is that it prevents the appearance of gapping holes in continuity of the data and makes possible reliable estimates of future production and valuation for trading or other purposes. Also, in this manner conservation measures can be instituted, resulting in increased total income to the operators and other interested parties.

As for prestige, it is quite obvious that any statewide organization will attract more attention from the state and federal governments as well as from the industry than a small local group, or no organized group at all. In Mississippi, the governor and many state officials have been won over by the committee, and now better understand the position of the oil operator. As an example of the esteem that the committee has won, the following is quoted from the discussion presented by the Mississippi Oil and Gas Board at the Federal Power Commission hearing February 11, 1946: "Cooperation of industry with the board has been excellent. The supervisor of the board is a member of an Engineer Cooperative set up by industry which is strictly non-political and non-profit. Their reports are factual without interpretation, the latter not being construed a committee function."

The method of allocating oil and gas production used in the various states has not kept up with the advances made in the engineering field in determining the amount of oil and gas in place. Too much emphasis has heretofore been given in the allocation formula to surface acres and to per well allowables and to little emphasis has been given to reserves.

There has been a perceptible trend[29] in recent court decisions toward the establishment of allowables based in large part upon oil in place. This means that factual data gathered by engineering committees will play a much larger part in the councils of the regulatory bodies. It also means that operators, for their own self-protection, will be required to organize petroleum engineering committees for the gathering and presentation of factual data to support their contentions before regulatory bodies.

Whether used before regulatory bodies or not, these data will be needed by the operator for valuation and tax purposes and to fortify his position before the court. The need for these committees and the data which they assemble may be found in the field of secondary recovery operations and other operations connected with oil and gas too numerous to mention.

Legality Of Committees

A word should be said about the legality of engineering committees. As a general rule it may safely be said that cooperative activities of operators in the same pool, effected through an engineering committee, solely confined to field work for the purpose of securing data and information, its accumulation and dissemination, cannot be considered as cooperative activities forbidden by our laws.

The contracts under which the engineering committees mentioned herein carry on their activities have been found to be under their terms well within the law. However, members will not be protected simply because they have reduced their purposes to writing if, as a matter of fact, in their meetings, discussions and activities they make use of their association to violate the law.

There is a possibility that the chairman of the committee or one of its members may be subpoenaed to testifyy in private litigation or before public bodies with reference to the information and data gathered by the Committee. We do not believe that such data are subject to court subpoena. Immunity should be claimed by the individual, based upon the ground that professional testimony is sought to be elicited and on the further ground that the data upon which the testinmony would be based are not the property of the witness but belong to the individual members of the committee or the operators.

As an example of the restrictions imposed on the use which can be made of the data belonging to the Mississippi committee: A letter from Governor Bailey of Mississippi addressed jointly to me as chairman, the vice chairman and the secretary, under date of August 2, 1945, requests the services of the Director and data belonging to the committee to prepare a report to be presented at a hearing of the Federal Power Commission in Biloxi, Miss., February 11, 1946. The position of the committee is stated cleared in our answer to the Governor under date of August 6, 1945, in which it is set forth that no member, including the Director, is allowed to speak for the committee except by unanimous consent of the general committee. However, any member, or the Director, may express his own personal opinion.

Cooperative petroleum engineering committees have filled what would have been a gap by suppling important factual data to their members for the past 13 to 16 years. This gap would ordinarily be partially filled in this respect if the taxpayer and oil and gas producer got their money's worth, so to speak, from those states which maintain so-called full-fledged regulatory bodies. Several of these state organizations do publish statistics relating to well completions, well abandonments, initial production and the like, but not to the extent which is possible. A wealth of material is available in their files which could be published. However, Arkansas is an exception. The Arkansas Oil and Gas Commission does publish a quarterly bulletin of factual data. Despite the fact that state oil and gas regulatory bodies' scope of operations would not ordinarily cover the presentation of data to the extent and in the very complete form characteristic of the engineering committees, I still say the taxpayer, the citizen and the producer, where special taxes are levied against production to support these state regulatory bodies, are not getting their money's worth in this respect. It is true that many of the oil and gas producing states' agencies publish from time to time some meritorious geological and statistical reports concerning oil and gas developments. These reports contain just a part of the needed information, therefore, the contribution from this source is piecemeal and generally irregular as to appearance. They are usually so late as to greatly lessen their value in making engineering studies of fields and their reservoirs. They are of more value in guidance for secondary recovery.

The United States Bureau of Mines and the United States Geological Survey publish excellent reports on many oil and gas fields and particular problems connected therewith. However, the reports generally appear late in the life of the field Consequently very little contribution is made toward improving the production practice of the field. In many instances the factual data available from petroleum engineering committees have contributed to the excellence of the reports from these government service organizations. State government work pertaining to engineering data is usually scant and sparse in character because it is generally subject to the appropriation frame of mind of the legislators and other sundry influences.

The point I want to emphasize is that none of the various governmental agencies supported by the taxpayer furnish adequate, timely and continuous, periodic factual data properly organized which will permit the individual operator to do his own analyzing of any problem on which he may choose to work.

You may ask: "How does the operation of fact-finding petroleum engineeering committees fit into the picture with state regulatory bodies dealing with the regulation or oil and gas production?" In the case of the state of Mississippi, important discoveries of oil and gas were made in rather a short time. The state was not prepared to supervise either from the standpoint of experienced personnel or of knowing what statewide rules and regulations to issue. It was believed that a statewide oil and gas engineering committee to collect factual data early in the life of the oil and gas development of the state would be advantageous to the members of such a committee,

and to the supervisor of the State Oil and Gas Board, who is an ex-officio member of the Mississippi Oil and Gas Engineering Committee.

Useful Future

Since the public agencies did not seize the opportunity of gathering factual data in the complete manner that petroleum engineering committees are doing, committees of this type do have a useful future. The only thing that can supplant them or encroach upon their activities is for the state regulatory bodies to suddenly become very efficient. Should this occur we would all be agreeably surprised. As matters now stand, more and more engineering committees are being organized as the need arises. We think the Mississippi Oil and Gas Engineering Committee as it is set up and by its performance during the first year of operation has met every expectation and is exemplary in every respect.

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Aerial Photography

■ CONTINUED FROM PAGE 50

portion to the skill of the geological observer in interpreting drainage and topographic form.

To the geologist, the usefulness of a mosaic depends not so much upon its constancy of scale as upon the way the photos were torn in matching one on another. If the photos are torn along natural objects such as hog-back ridges, and narrow streams, to prevent the match being detected, the resulting mosaic may be of slight geological use.

The geologist will be searching chiefly for signs of bedding, which at the prevailing scale of government photographs may be near or perhaps even beyond the limit of vision and will very likely misinterpret any irregularity in photographic image. Mis-matchings that go unnoticed by the casual, though experienced, observer will, in all probability be noticed by the geological observer studying the mosaic with a magnifying glass. Whether he notices the mis-match or whether he misinterprets its significance, it is still a hazard to the correct geological interpretation of the mosaic.

From his own experience in the geological interpretation of many kinds of aerial photographs, the writer recommends that in laying mosaics of extensive areas, technicians with geological training be employed in matching the photos or if this is impossible in the supervision of the work. To do so may greatly increase the geological usefulness of the mosaic. In the rugged lands of the world where much aerial photography remains to be done, the mosaic may prove to be the only suitable device for securing a continuous picture map.

The Geological Conclusions

In a field of thought and technology which touches many phases of geology, any brief remarks, though made with the best intentions, are sure to be a partial distortion of the truth. The following brief sattements are no exception:

1. In mountainous terrain with thick lithologic units, the main structural irregularities stand out in great clearness. Accordingly the scale of photos is relatively unimportant. Drainage patterns may usually be relied upon to show the location, if not the exact nature, of structural features.

2. In mountainous terrain where structures, though steep, are small in relation to the thickness of lithologic units as in a thick shale, neither drainage nor topographic form, considered separately or together, can be depended upon exclusively for discovery of structures. Though there is usually some genetic relationship, it is inconsistent from one locality to another.

3. In the "strata-bench lands" of the world whether high or low the plateaus and plains of some authors) as well as in those uncommon forms, the true depositional coastal plains, the drainage pattern along, though important, cannot be relied upon for discovery. Experienced oil geologists know that there are usually some drainage manifestations of local structure but they may not be consistent on neighboring structures.

4. Confusion may be introduced into topographic interpretation by the effects of weathering and erosion under the rigorous late Pleistocene climate of certain regions which are now warmer and dryer. Other topographic "abnormalities" are very common in some regions; for example, creep and slump topography. The geological student of aerial photos will be compelled to spend much of his time learning to recognize the topographic effects of these so-called "abnormalities" in order that they may be subtracted from the composite topographic form. He will thus be better able to recognize the effects of bedrock stratification and thus to estimate the strike and dip.

5. Only experienced men with good eyesight will make much progress in the geological study of aerial photos. If larger scale photographs become available the eye strain will not be so severe as at present.

6. When photos are used to construct good topographic maps, an expensive engineering problem arises. Ground surveying cannot be eliminated nor even much reduced, so great are the common distortions of the stereoscopic model.

7. The geological student of aerial photos will find that satisfactory progress depends not so much upon an understanding of the physics, chemistry, and geometry of the pictures but chiefly upon his ability to recognize bedding and to interpret the significance of topographic form correctly. More specifically he will have to recognize in the photos those geological features which simulate bedding but which are not bedding. To do this is very difficult in soft rock terrain because at 1/20,000 (the most common flght scale) the bedding at many places is invisible.

8. In unexplored regions, any geological method of exploration, including any type of oblique or vertical photography, will bring discoveries. Moreover, it is the writer's considered opinion that even where the search is difficult, aerial photos are of great value in the discovery of structures, though not necessarily in their detailed mapping. The exact degree of usefulness varies in different regions and is not yet too well known, for as yet but very few of the available photos have been made to the specifications of an experienced geologist or for geological purposes. The specifications thus far used were written mainly by engineers interested in the modification of water courses or in erosion and crop-acreage control. The prevailing scale in the United States, of 1/20,000, is too small for geological study in many regions.

As an experimental beginning in aerial photography for geological purposes the writer suggests: (1) that photographs for detail be made with a lens of 12-inch focal length, on a scale of 1/8000; and (2) that only the finest grained film, and appropriate developing procedures be used.

In addition to such photographs for detail, high altitude photographs be taken at, say 1/40,000 with a lens of 6-inch focal length. The best scale and focal length in each case will depend upon the relief of the ground to be photographed.

9. The writer is very optimistic about the future of aerial photography for geological discovery, not only in the wilderness but in certain regions with a long history of exploration by other methods. Especially in its use for discovery the expense of aerial photography will be negligible in comparison to its returns.

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Expanded Metal Platform, Raised Above Mud Suctions, Provides Safe Walkway

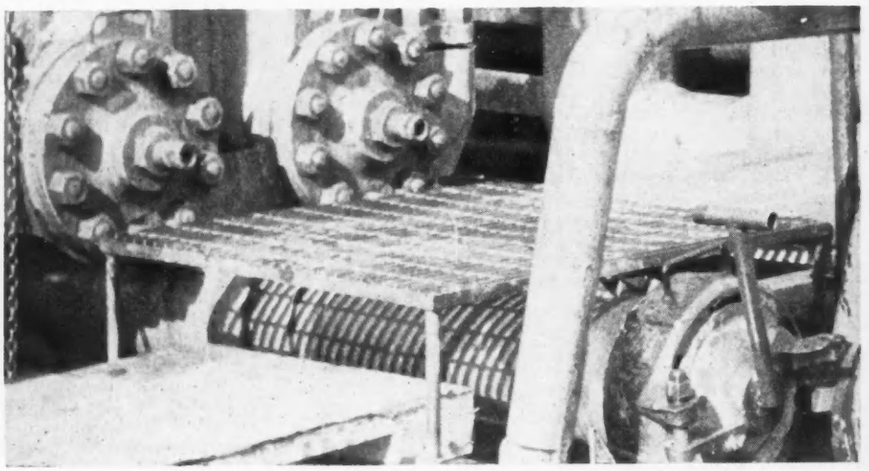
To provide safe footing across the mud-pump suction lines, one company provides a specially built section of expanded metal flooring, fitted with corner posts which fit snugly into sockets welded to the pump skid, and which provide the necessary clearance over the suctions and at the same time permit them to be inspected without removing any portion of the walk.

MUD PUMP SAFETY

The expanded metal is welded into a frame of angle or channel iron sufficiently heavy to afford the desired support for whatever span is required to cross the suction lines, with the corner posts welded at the junction of longitudinal and transverse channels for maximum rigidity.

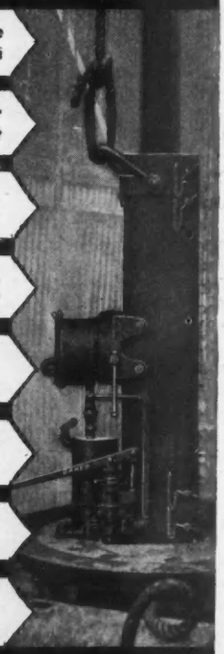
When it is necessary to work with the suction lines—as for manifolding the pumps—the cross-over may be removed and the lines exposed with full working clearance, simply by lifting the corner posts from their sockets.

Adjoining sections of the plank walkway may be brought to the level of the suction-line cross-over if desired, but the change in type of footing is usually sufficient indication of variation in walkway level to prevent stumbling against the elevated edge of the metal crossing.



Have You Any Bent Kellys or Drill Pipe?

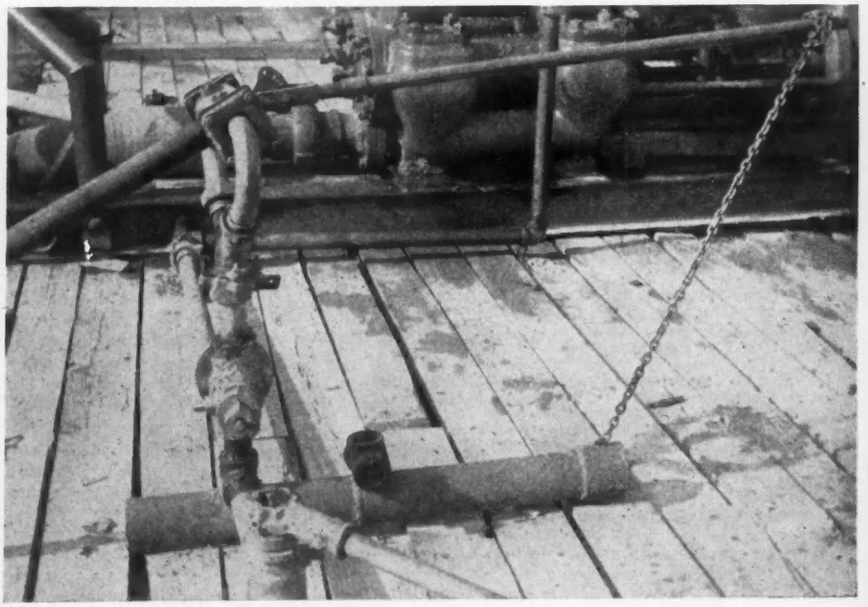
Here's a good, safe way to straighten Kelly, Drill Collar or Drill Pipe as it hangs in the derrick. Easily carried on a pick-up truck, and lifted on rotary table with catline. Ideal for foreign use or on wildcat wells where transporting Kelly or pipe from rig to shop is a problem. Handles pipe up to 8¾".



BAKER

Portable Hydraulic Kelly and Pipe Straightener

Tie-Down Permits Accurate Gunning of Mud Pits



Adjusting the mud gun for best conditioning of the mud in the pit usually calls for some sort of anchor to maintain the setting, as it is rarely possible or advisable to put one man on the gun after the cake is once broken up enough to be shifted by flow within the pit.

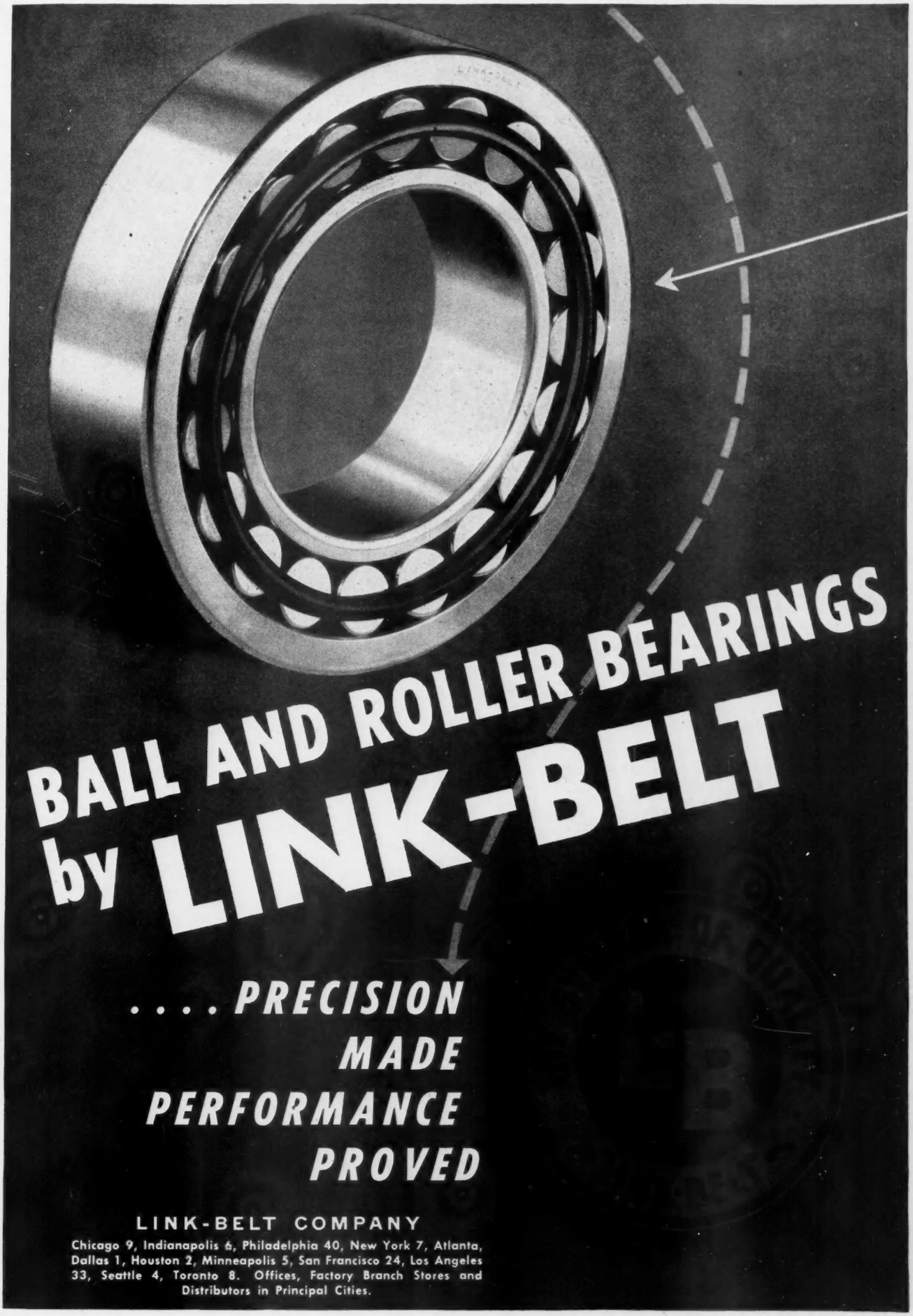
MUD MIXING

One company makes up the mud line with a stub or spud on the horizontal pipe just below the riser which carries the gun. This stub is set into a corresponding hole in a length of heavy pipe, made some 6 or 7 feet long, and with the hole a foot from one end.

Through a hole at the opposite end of the anchor pipe is threaded a length of chain, the free end of which may be wrapped around the handle of the mud gun to hold it at any desired angle.

The hold-down pipe itself is pulled tightly against the flooring by the weight of the gun, and thus firmly maintains its initial setting. To shift the gun, it is necessary first to remove the tension on the chain, after which the supporting pipe may be swung to any angle around the stub, and then again fastened firmly into place by again taking up on the chain.

Any scrap pipe of 4- to 6-inch diameter will serve for the anchor pipe, just so long as it has sufficient wall thickness to give the desired lever effect.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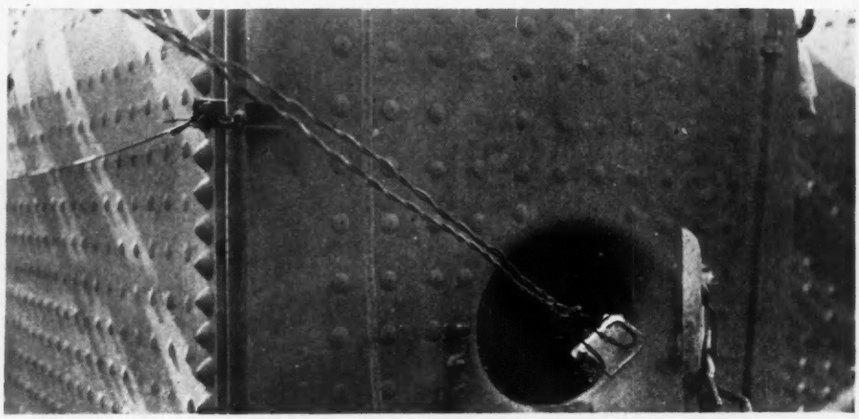
DRILLING HINTS

Toaster Improves Taste of On-the-Tour Sandwiches



CREW COMFORT

An enterprising member of one drilling crew, with an eye toward increasing his cold weather comfort as well as aiding his digestive processes, devised a simply-built toaster now shared by all members of his crew for heating sandwiches at meal-time.

The toaster is made of wire of sufficient strength to permit a long handle without undue bending or possible loss of the substance being heated. Two separate sections are required, designed to operate like blades of a pair of scissors. At the lower end of each holder the wire is bent in such manner as to provide a flat surface which, when opposed to the corresponding portion of the opposing element, presents flat-surface friction grips between which sandwiches are held.

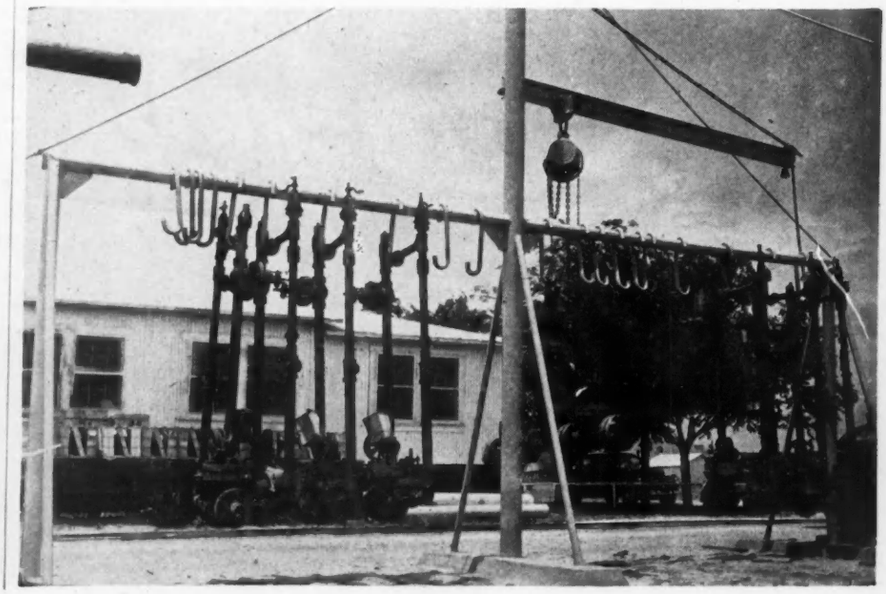
An ordinary 2-inch bolt is used as pivot, the wires of each gripping element being wrapped around the bolt in such manner as to insure permanence.

Prefabricated Christmas Trees Speed Completions

WELL EQUIPMENT

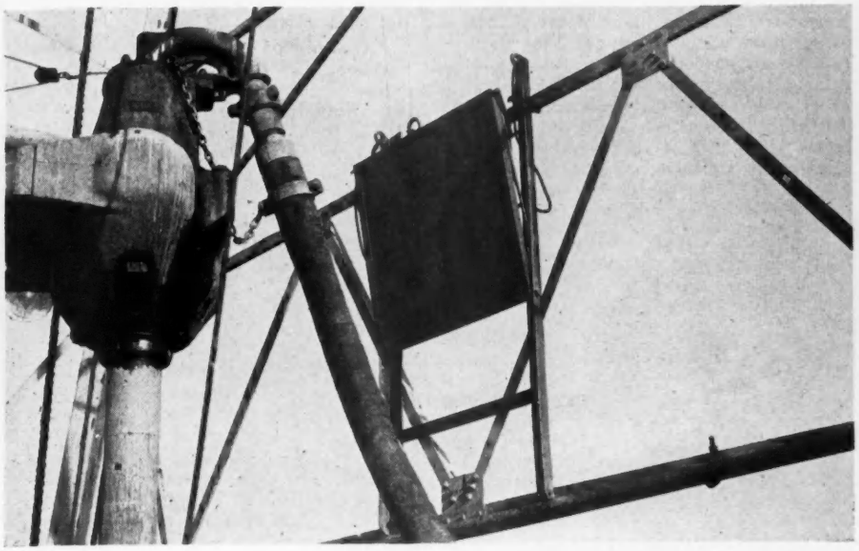
Saving considerable time in hooking up of routine completions in a proven area is the method utilized by one company for speedy handling of Christmas trees. Instead of making them up as needed, a number of extra sets are made up in the shop and "stored" on a special rack in the yard where they may be reached easily by field trucks.

The rack illustrated has as its center post a support for a small jib crane, the boom of which can reach to either end of the rack. Previously-assembled Christmas tree fittings, including flow lines and beans, are hung on sturdy hooks looped over the horizontal rack arm, and may be easily inspected and loaded on the trucks. Valve wheels are lashed separately to the body of each assembly.



DRILLING HINTS

Hinged Platform Speeds Servicing of Swivel



SERVICING SAFETY

Unusually neat and simple to construct is the shop-made fold-away platform devised by one company for aiding the servicing operations on the swivel. The all-steel device consists of an upright pair of angle iron members on which is swung a hinged platform, the latter also being made of angle iron and having a steel flooring in it. A pair of steel cables limits the travel of the platform to the horizontal or working position, this flexibility of design permitting the platform to be swung up and latched out of the way while it is not in service. The entire structure is bolted between the first and second girts and is spotted over or near the point where the swivel will come to rest when the kelly is in the rat-hole.

Brake Drum Crank Device Checks Starting Hazard

ENGINE STARTING

A wheel of some sort is gradually replacing the crank on oil-field engines due to the arm-breaking hazard. This was first applied by welding an automobile wheel to the shaft of a crank after the handle had been cut off. The engine was then started by pulling on the outside of the wheel with the hands, or by pulling with the pumper's car on a rope wrapped around the wheel when motors were hard to start.

Lately, one company has applied a smaller wheel to the smaller motors used around a drilling rig for the water pump, light plant, etc. The photograph shows a brake drum being used as a spindle upon which to wrap the rope. Starting is done by pulling on the rope the same as in starting an outboard motor. As soon as the engine starts, the crank spring forces the teeth in the collar of the crank away from the pin in the crankshaft, the same as when a crank was used.

In the background, the edge of another wheel can be seen, which performs the same function as the wheel in the foreground.

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Reasons Are Outlined for Permanent Price Differential for Stripper Wells

A vigorous campaign is underway to obtain federal legislation establishing a permanent price differential for stripper wells. One of the most comprehensive arguments in favor of a permanent price differential for marginal producers has been prepared by Ernest Shamblin, independent oil man of Bristow, Okla., who has been leading the fight in his state. He has prepared a 9-point program favoring a permanent price differential for stripper well production because:

"1. Approximately 95 percent of the wells in Oklahoma (49,396) are marginal or stripper wells which produce 58 million or 46 percent of the state's annual total production of 125 million barrels. Operators and royalty owners are paid $61 million for this oil and the state collects $3½ million in gross production tax, which in turn helps to build roads and finance schools. (Subsidy is not included.)

"2. Thousands of men, mostly heads of families, are employed in connection with producing these wells and the greater part of the money received by operators is paid to workmen, who in turn spend most of it with local business men. A large percent of the business in Oklahoma comes directly from oil field workers.

"3. Price of crude oil was frozen in October, 1941, at a subnormal level, while lifting costs have almost doubled. An immediate increase in lifting costs in the form of increased wages and material, is foreseen as is an increase in the living cost for operators.

"4. The existing federal subsidy granted in August, 1944, on stripper wells expires June 30, 1946, and unless some relief is provided, thousands of small wells will be plugged with tremendous financial loss to the state, county and local schools. Thousands of men will be thrown out of work and many operators will be ruined financially.

"5. These conditions extend beyond the borders of Oklahoma, since approximately 25 percent of our known national oil reserves of 20 billion barrels is represented in these stripper wells. Oil is indispensable to modern mechanized warfare, and in spite of our desire for permanent peace, we think it would be unwise to destroy a large percent of our oil reserve by abandonment. Millions of barrels of oil remain to be recovered from Oklahoma fields by secondary recovery when the price of crude oil justifies. Oil now is selling, and since 1941 has sold, at a price below the cost of replacement.

"6. Labor is the greatest factor in lifting costs. Wage and hour laws passed by Congress caused an increase in operating cost. It is not unreasonable to expect that same Congress to make possible a condition whereby the operator can meet the wage requirement and still realize a profit from his investment, otherwise the operator would be legislated out of business and the state and labor would likewise become the losers. Congress should be motivated by a desire for economic justice and not political expediency.

"7. Opposing this program will be only the uniformed and the radical anti-New Dealer who is so prejudiced as to not see any good in anything called a subsidy, regardless of its merits. In this they are inconsistent because they would not publicly advocate the repeal of the soil conservation program, the reforestration program, flood control, old age assistance or federal unemployment benefits.

"8. Wage and hour laws, plus a higher standard of living, demand some form of controlled economy, but such a system should be so controlled as not to bring undue hardship on any class or group or destroy an irreplaceable resource. The least we could hope for would be an extension of the conservation payment until such a time as the demand for crude oil would bring about a price adjustment after OPA has been discontinued.

"9. A small general increase in crude prices is inadequate to protect the small operator."

"Public spirited citizens" were asked to join in a petition to Congress immediately to enact the needed legislation.

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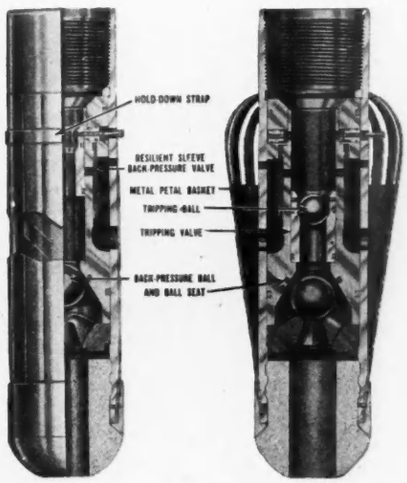
NEW EQUIPMENT LITERATURE

For additional information, use mailing card inserted opposite this page

1—Cementing Shoe

Baker Oil Tools, Inc., is offering a triplex cementing shoe which combines three features.

It has the regular whirler float shoe for guiding, floating and cementing pipe,



a metal petal basket attached to the shoe to form a bridge, even in irregularly shaped hole to prevent the cement slurry from settling into permeable low-pressure zones below the shoe, and side whirler ports covered with reinforced resilient rubber sleeve-type back-pressure valves to prevent a return flow, thus eliminating the necessity of maintaining pressure on the casing to prevent cement back flow.

All parts are made of drillable materials, and outside diameter of the shoe is about ½ inch larger than the O.D. of a standard casing coupling.

(Check item 1 on coupon for more information.)

2—Heavy Duty Swivel

The Brewster Company, Inc. has announced availability of a new heavy duty oilbath swivel. It is rated at 250 tons static load and a drilling depth of 10,000 feet. All bearings and moving parts are submerged in an oil bath. Heavy duty oil seals are used throughout. Three anti-friction bearings are used, two straight roller and one tapered roller. The main body is of cast steel with alloy steels for each specific part. Fluid passage is 3 inches, and has a specially hardened and ground wash pipe.

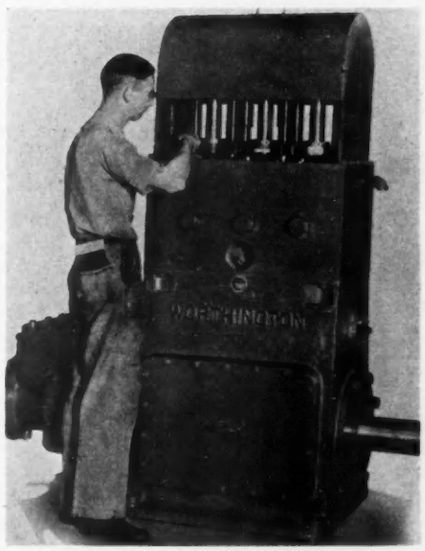
(Check item 2 on coupon for more information.)

3—Pump

The Worthington Pump & Machinery Corporation has in production an improved variable stroke triplex pump termed the Automatic Variflo pump. Objectives in the development of the pump have been the design of a high-pressure triplex pump having stepless capacity variation from 0 to 100 percent and affording increased dependability and easier maintenance.

It is being produced in identically the same frame as used for the corresponding size of constant stroke pumps, with the exception of the control cylinder shown on the left side of the pump. The crankshaft is located at the base in the fully enclosed frame. Bearings are of the roller type, and positive, pressure lubrication is provided by a direct-driven gear oil pump.

The stroke-changing elements and other bearings are flooded with filtered oil at all times, and the oil pump also provides oil pressure for operating the hydraulic stroke control cylinder. The stuffing boxes are on top of the cylinder where they can be packed and adjusted



without difficulty and are easily visible. The complete variable stroke mechanism is self-contained in the crankshaft and functions on the simple principle of varying the position of the eccentric to suit the desired stroke or pumping capacity.

(Check item 3 on coupon for more information.)

4—Pipe Coupling

Snyder Sales Corporation announces a new high-pressure 90-degree (elbow) swivel pipe coupling in sizes from ⅛-inch to 1-inch nominal tubing ratings.

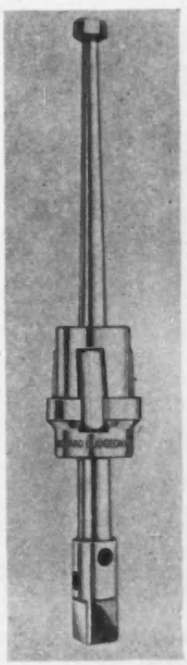
Constructed of steel, it has a combination of multiple synthetic packings and metallic seals for protection against leakage at high and low pressures. A double row of ball bearings, plus metal-backed packings give low resistance to rotation. Aircraft company and governmental agency tests show a torque of 2.5 inch-pounds at 1500 pounds per square inch and 9.6 inch-pounds at 3000

p.s.i. The unit is precision built and comes in a variety of threaded and elbow connections.

(Check item 4 on coupon for more information.)

5—Tube Expander

Richard Dudgeon announces the Model 16, Dudgeon tube expander for general boiler work and repair. It is a tool designed with a minimum number of parts, consisting of a frame, rolls and a mandrel.



The expander may be readily dismantled and new rolls quickly inserted. The frame holding the rolls is one-piece heat treated steel, hardened and tempered for toughness and durability. Mandrel and rolls are of hardened tool steel. Rolls are extra long and are reversible for double length of service. They are set at an angle with the mandrel for self-feed. Reversing the mandrel releases the expander from the tube.

Compactness of the expander permits it to work close to the boiler shell, rivet lines or tubes grouped together.

(Check item 5 on coupon for more information.)

6—Jetting Down Swivel

King Oil Tools has perfected the King two-inch Type "H" jetting down swivel, designed for jetting down shot holes for seismograph work or for shallow water wells. It is only intended to be

used where loads are light and the pipe is rotated at relatively low speeds.

Lightness and portability are features of the swivel. It weighs less than nine pounds complete and can easily be transported by hand when work is being done in inaccessible places where all the equipment must be moved manually.

(Check item 6 on coupon for more information.)

7—Strainer

J. A. Zurn Manufacturing Company has developed a suction pipe line strainer which maintains maximum liquid flow through piping systems while performing the function of protecting pumps

and moving parts of other vital equipment which might be damaged by foreign particles. Maximum liquid flow is assured since the total area of the strainer basket perforations exceeds the area of the opening of the inlet by more than a 1.5 ratio.

The strainer is hydrostatically tested to meet various service pressures. Available for either high or low pressures, the high pressure strainers have a removable drop-bolted cover, while the low pressure strainers have yoke-clamp covers. The strainer basket is removable for cleaning. The unit is also available with a cleanout plug for blow-down cleaning when practical. Depending upon requirements, the units are made in cast bronze, steel, semi-steel, iron, or alloyed metals.

(Check item 7 on coupon for more information.)

8—Heavy-Duty Truck

Motor Truck Division, International Harvester Company, announces a new heavy duty truck designed especially for use on the West Coast, a 6x4 or 6-wheel vehicle with a tandem-drive rear axle and a gross vehicle weight rating of 40,000 pounds. The heavy-duty chassis is powered by a choice of five optional engines.

The clutch is of the 2-plate type, 14-inch diameter, with all but two of the engines which call for a 15½-inch clutch. A selection of six heavy-duty transmissions of both four and five speed types is available to meet the specific requirements of the operation. Optional equipment also includes a choice of four 3-speed auxiliary transmissions of either the direct or over-drive type.

The truck is equipped with tandem-drive axles with suitable ratios to meet the heavy-duty service required by oil field hauling. Air brakes are standard equipment, front and rear, of ample size and capacity. Steering gear is of the roller-bearing cam-and-twin lever type, out-board-mounted where it is easily accessible for adjustment and service. Disc-type wheels are standard.

A special rubber-cushioned auxiliary transmission mounting which facilitates the easy removal of the entire unit for servicing. Engines are 3-point mounted and rubber cushioned.

The cab provides maximum visibility.

(Check item 8 on coupon for more information.)

9—Landing Nipple

Otis Pressure Control, Inc., Dallas, is offering a definitely located standard foundation for use of sub-surface controls in flowing wells. The manufacturer claims that with its Type J Landing Nipple installed when tubing is run, several other important operations are greatly simplified.

The nipple provides a definitely located seat for the Type J Removable Pack-off and Locking Assembly which, in turn, makes the installation of other sub-surface tools simple and practical regardless of the temperatures, pressures, and depth encountered, it is claimed.

The Type J Flow Coupling which is an integral part of the landing nipple has extra thick walls which afford prolonged wear against abrasive action caused by possible turbulent flow action immediately above the actual control device.

The Type J removable pack-off and locking assembly seated in the landing nipple is a positively locked and sealed device built to facilitate successful operation of other Otis pressure controls under 10,000 pounds per square inch, and 350 degrees temperature. A slight restriction in the landing nipple makes possible the use of a new asbestos-base heat-resistant packing. The packing fits snugly in the landing nipple so that it is not necessary to flow the well to set the packing, a feature of importance when there is danger of pulling sand or water into the tubing string.

(Check item 9 on coupon for more information.)

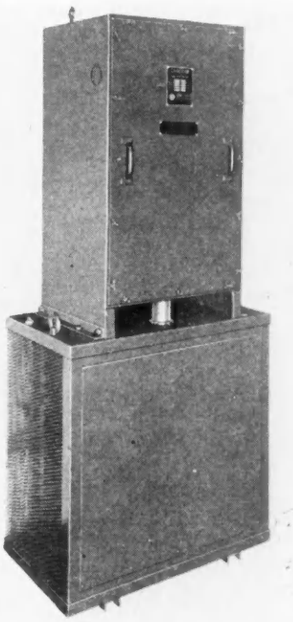
10—Mud Pump Piston

MacClatchie Manufacturing Company, Compton, Calif., announces a new mud pump piston called the "Wear-Ever Type R," designed for use at highest pressures under all operating conditions, for pumping hot mud, oil laden drilling fluids, acids, etc. The piston consists of three parts, an alloy steel body or hub, and two replaceable piston rubbers moulded onto steel reinforcing plates. The rubbers are securely held to the central hub by three cap screws which when tightened compress the rubber gasket at the back of the reinforcing plate without distorting the outside edge or peripheral shape of the rubber.

(Check item 10 on coupon for more information.)

11—Power Factor Regulator

Modern Control Equipment Company announces the Haug System Power Factor Regulator designed for raising the power factor of commercial power mediums by taking the magnetizing current



off the line. It is claimed that the regulator greatly reduces power expense.

The regulator does not interfere with connected apparatus. In fact it is said by the manufacturer that the regulator will result in more uniform and efficient operation of motors and machines, particularly welding machines.

Reactors and transformers are of dry type construction. The regulator is small and can be installed in almost any desired location.

(Check item 11 on coupon for more information.)

12—Selenium Rectifier

Westinghouse Electric Corporation has announced a selenium rectifier which can be submerged in boiling water or packed in ice and still change alternating current into direct current at an efficiency equal to that obtained under normal operating conditions.

The new rectifier, a result of seven years of research and development by the corporation's engineers, consists of a heavily tin-plated, hermetically sealed container inside of which is placed selenium suspended in oil. The manufacturers claim it will operate with only a slight drop in current output at a total temperature higher than the boiling point of water and will last much in excess of 1000 hours.

(Check item 12 on coupon for more information.)

13—Electrode

Air Reduction Sales Company has announced a new all-position, mild steel electrode, Airco Number 312, designed primarily to prevent underbead cracking in the welding of hardenable steels. It is claimed that laboratory tests and field applications indicate this electrode to be satisfactory for welding low alloy, high tensile steels, particularly in heavy sections where preheat must be used with conventional type electrodes to minimize cracking; free machining steels which normally run quite high in sulphur; and cold-rolled steels where excessive porosity is normally encountered with conventional type mild steel electrodes. For material to be vitreous-enameled after welding, this electrode makes possible production of highly satisfactory enameled surfaces without any preheat treatment prior to the enameling operation.

(Check item 13 on coupon for more information.)

14—Fire Extinguisher

Pressurelube, All-Out Fire Extinguisher Division, announces a dry chemical fire extinguisher which is said to perform effectively under all climatic conditions, in extreme temperatures, and in the presence of winds or drafts.

The dry chemical is ejected, under pressure, in a flat stream, that separates the flame from the burning material, instantly forming a dense, fire smothering cloud over the flaming area up to a distance of 18 feet. An insulating barrier between the operator and the flame is created. On hot metal surfaces the chemical forms an insulating film, helping to guard against dangerous re-flash.

The extinguisher has a squeeze grip nozzle for positive control. Light weight permits easy carrying.

(Check item 14 on coupon for more information.)

Literature

15—Draft Readings Device

The Davis Emergency Equipment Company, Inc., manufacturers of safety and gas alarm equipment, has issued a circular on a small portable instrument known as the Stack-O-Meter for indicating CO_2, stack temperatures and draft readings.

(Check item 15 on coupon for more information.)

16—Clutch

A booklet has been published by the Hardinge Company, Inc., which describes and illustrates the company's newly-acquired BLM "Auto-Centri" clutch. Manufacturing and sales rights have been obtained from the Automatic Clutch Corporation of Canada.

Dimensions and applications are given for the many sizes offered along with other pertinent engineering data.

(Check item 16 on coupon for more information.)

17—Gas Alarm System

The Davis Emergency Equipment Company has issued Bulletin 1116E on the Davis combustible gas alarm system, a method of detecting and giving audible notification of hazardous gas or vapor conditions sometimes present during industrial processing operations.

In its eight pages, 8½ inches by 11 inches, this bulletin describes the various combinations possible with this system, together with photographs showing the control panel, which is placed in a gas-free area, and the explosion-proof analyzer head which detects the presence of combustible gas or vapor at point of origin.

(Check item 17 on coupon for more information.)

18—X-Ray Equipment

North American Philips Company, Incorporated, announces a booklet describing "Norelco Industrial X-ray Equipment." The text covers the Searchray, models 80, 150 and 90, giving illustrations and specifications in each case, the X-ray Spectrometer and camera-type X-ray Diffraction Unit, and includes a convenient application chart showing which model Searchray is best suited for a given job.

(Check item 18 on coupon for more information.)

19—Castings

Allegheny Ludlum Steel Corporation is offering "Blue Sheets" of reference data on Allegheny stainless steel castings and shock resisting steel for tools and machine parts.

The sheets contain reference data certified by Allegheny Ludlum technical staff and prepared from laboratory and service tests. Physical properties, corrosion and oxidation resistance, effects of elevated temperature, and heat treating procedures and results are given in condensed form for quick reference.

(Check item 19 on coupon for more information.)

20—Stainless Steels

Lebanon Steel Foundry has issued a bulletin on Lebanon straight chromium stainless steels. These steels are valuable wherever the presence of nickel as the alloying agent may be objectionable and where their physical, machining and corrosion-resistant characteristics economically meet service conditions.

(Check item 20 on coupon for more information.)

Crude Yield Up Slightly; Runs to Stills Show Decline; Gasoline Stocks Reduced

Crude oil production increased silghtly, while runs to U. S. refinery stills showed a moderate decline during the week ended March 16.

Stocks of gasoline were reduced, despite increased production, reflecting the beginning of the heavy demand season. The demand for light and heavy burning oils showed considerable let-up, as their combined stocks were decreased by less than 1000 barrels a day, although production of these fuels was cut back sharply. These trends were revealed by The American Petroleum Institute's latest weekly report.

Production of crude oil in the United States averaged 4,415,000 barrels daily during the week ended March 16, an increase of 12,000 barrels per day over the previous week, and 359,000 barrels or 7.5 percent, less than the 4,774,000 daily average of the comparable week of last year.

Runs of crude to refinery stills averaged 4,607,000 barrels a day during the week, which was a drop of 49,000 barrels from the preceding week's average, and a 3 percent, or 144,000-barrel, decrease from the 4,751,000 daily run of the same week a year ago.

Refinable crude stocks were 226,112,000 barrels on March 9, reported the U. S. Bureau of Mines. This new figure represents a 3,318,000 barrel reduction from the crude held at the end of the week before, but 7,352,000, or 3.4 percent, more than the 218,760,000 barrels on hand March 10, 1945.

Production of gasoline including natural gasoline blends, increased 181,000 barrels bringing the week's output to 13,850,000 barrels, 878,000 barrels, or 6 percent, under the production of the same period of last year. Stocks of gasoline began to be reduced, as the motor fuel's heavy demand season showed signs of getting under way, and brought the amount on hand at the end of the week down to 104,781,000 barrels, a decrease of 120,000 barrels from the week before. These stocks are 6,376,000 barrels, or 6.5 percent, greater than the 98,405,000 barrels on hand March 17 last year.

The output of distillate fuel oil for the week amounted to 5,655,000 barrels, a decrease from the previous week of 1,274,000 barrels, and an increase of 1,015,000 barrels, or 21.9 percent, over the 4,640,000 produced in the corresponding week of 1945. The previous heavy demand for this fuel oil slackened during the week, resulting in 616,000 barrels being added to stocks, bringing the total barrels held to 25,747,000, which is 127,000, or ½ of one percent, short of matching last year's inventory.

Residual fuel oil production, down 397,000 barrels amounted to 8,382,000 barrels for the week, a decrease of 324,000 barrels, or 3.7 percent, from the output of the same week a year ago. Withdrawal from stocks of this fuel continued, as stocks were reduced 621,000 barrels during the week, leaving 37,767,000 barrels on hand. This total, lowest since World War I years, is 5,476,000 barrels, or 12.7 percent, less than the 43,243,000 barrels held March 17 last year.

Trends of Operations and Changes in Stocks

Figures on crude stocks are from Bureau of Mines weekly reports; all others from American Petroleum Institute weekly reports, which are estimates on Bureau of Mines basis.

(All figures in thousands of barrels—add 000)

HIGHS AND LOWS OF RECENT YEARS

ITEM	Crude Oil Prod.		Runs to Stills		Crude Stocks		Gasoline Stocks		Gasoil and Distillate Stocks		Residual Fuel Oil Stocks	
	Barrels Daily	Week Ended	Barrels Daily	Week Ended	Barrels	Week Ended	Barrels	Week Ended	Barrels	Week Ended	Barrels	Week Ended
Highs:												
1941	4,337	11-22	4,120	10-18	266,187	3-29	99,727	3-29	[1]54,983	11-15	102,448	1- 4
1942	4,337	2- 7	3,961	1- 3	263,208	3-28	[1]109,281	3-14	47,861	11-14	95,857	1- 8
1943	4,436	11-13	4,331	12- 4	245,752	5-29	94,159	3-20	47,187	11-27	72,881	1- 2
1944	4,762	9-30	4,798	12-30	240,992	1- 1	89,162	4- 1	48,162	10-28	64,744	10- 7
1945	[1]4,944	7-14	[1]5,140	8-18	227,554	10-13	99,012	3-24	45,341	11-17	56,074	1- 6
1946	4,726	3- 2	4,779	3- 2	229,430	3- 2	105,233	2-16	35,199	1- 5	42,371	1- 5
Lows:												
1939	[3]1,601	8-26	3,125	2-18	[2]229,127	10-12	71,152	10- 7	20,722	4-15	105,397	4- 3
1941	3,364	1-11	3,490	1-18	240,399	11-15	79,923	10- 4	28,382	4-12	90,914	7-13
1942	3,297	7- 4	3,393	5-23	231,896	12-12	75,934	12- 5	29,240	4-25	72,962	12-26
1943	3,821	1- 9	3,579	3-18	232,191	1- 9	68,182	10-16	30,732	4- 3	57,596	12-25
1944	4,357	1- 1	4,228	2-12	220,258	9- 9	76,302	1- 1	30,232	4-19	49,737	3-18
1945	3,621	10- 6	3,409	10- 6	[4]211,813	8-25	70,791	10-13	26,483	3-17	38,548	5-26
1946	4,403	3- 9	4,498	1-12	218,193	1- 5	98,494	1- 5	25,131	3- 9	37,767	3-16

TRENDS OF 1945 AND 1946

Trends in Week Ended	Crude Oil			Gasoline		Gasoil and Distillate		Residual Fuel	
	Production Daily	Runs to Stills Daily	Stocks Week End	Production Weekly	Stocks Week End	Production Weekly	Stocks Week End	Production Weekly	Stocks Week End
1945:									
January 27	4,727	4,756	221,310	14,957	88,223	4,843	33,561	9,252	51,119
February 24	4,777	4,803	219,351	15,500	95,972	4,958	28,753	9,084	46,713
March 31	4,781	4,677	223,782	14,644	98,758	4,548	26,889	9,184	41,745
April 28	4,805	4,780	223,474	14,633	94,068	4,636	28,273	9,379	39,813
May 26	4,887	4,950	222,831	15,194	89,121	4,667	29,184	9,670	38,548
June 30	4,903	4,999	220,781	15,546	86,472	4,910	32,213	9,077	40,488
July 28	4,930	4,996	218,507	16,106	86,008	4,598	36,071	9,586	42,283
August 25	4,892	4,931	[4]211,813	15,986	84,693	4,960	39,782	9,356	46,201
September 29	4,357	3,812	222,387	11,913	79,552	3,940	43,689	7,047	46,853
October 27	4,273	4,838	224,230	15,530	74,335	5,159	43,472	8,691	45,943
November 24	4,469	4,648	219,363	15,681	83,184	4,802	45,258	8,800	47,474
December 29	4,474	4,729	218,918	14,546	95,205	5,055	36,651	8,765	42,447
1946:									
January 5	4,548	4,651	218,193	14,488	98,494	5,293	35,199	8,867	42,371
January 26	4,626	4,553	220,544	13,622	101,737	5,720	29,498	8,411	39,722
February 23	4,714	4,595	226,699	13,175	104,709	5,728	25,398	7,913	39,290
March 2	4,726	4,779	229,430	13,871	104,462	5,888	25,148	8,634	38,441
March 9	4,403	4,656	226,112	13,669	104,901	6,929	25,131	8,779	38,388
March 16, 1946	4,415	4,607	.....	13,850	104,781	5,655	25,747	8,382	37,767
March 17, 1945	4,774	4,751	[5]218,760	14,728	98,405	4,640	25,874	8,706	43,243
Change:									
In week	+12	—49	—3,318	+181	—120	—1,274	+616	—397	—621
In year	—359	—144	+7,352	—878	+6,376	+1,015	—127	—324	—5,476
In year	—7.5%	—3.0%	+3.4%	—6.0%	+6.5%	+21.9%	—0.5%	—3.7%	—12.7%

[1] All time peak. [2] Lowest between January, 1922 and July 1, 1944. [3] Lowest since October, 1922, due to shutdown of six Mid-Continent states. [4] Lowest since December, 1921. [5] Stocks, March 10, 1945.

Skelly Adds Offices

Skelly Oil Company which has been expanding steadily during the last few years, now finds its Tulsa headquarters building too cramped and has leased the entire sixth floor of the Palace building. Skelly owns its own office building in Tulsa but F. T. Hopp, secretary-treasurer of the company, declared that expansion of the company's activities made it necessary to seek additional quarters. Recently Skelly took over several offices in the Tulsa World-Tribune building. Its new quarters in the Palace building covers approximately 5200 square feet of floor space and will be occupied by the company's legal department in charge of W. P. Z. German, general counsel. The space is undergoing extensive remodeling and will be occupied about mid-year.

Southwestern API Meet Chairmen Are Designated

Committee chairmen for the spring meeting of the Southwestern District API Division of Production, scheduled in Shreveport May 17-18 have been named by General Chairman H. C. Anderson as follows:

R. E. Bridges, registration committee; S. W. L. Backus, hotel arrangements; H. L. Kirkpatrict, publicity; and V. J. Martzell, entertainment. Official host for the meeting will be B. J. Dowd, chairman of the Ark-La-Tex Chapter.

W. E. Winn is district chairman and the program will be under the direction of W. V. Vietti.

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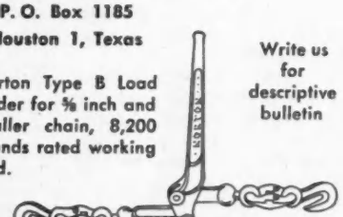

Perry Named Vice President Of Gulf Refining Company

N. H. Perry, former general superintendent of pipe lines for 27 years and associated with Gulf Refining Company for almost 43 years, has been elected vice president of the company. Born in Savannah, Georgia, he began his career with Gulf in June, 1903, as a fireman of a steam pump station in the old Batson field. Since that time, he has served progressively as engineer and chief engineer at Lufkin, pipe line superintendent at Tampico, Mexico, from 1914 to 1919 and from that date to his present advancement, he has been general superintendent of pipe lines with offices in Houston.

N. H. Perry

Pasotex Completes Survey For West Texas Extension

Pasotex Pipe Line Company has made a preliminary survey for the extension of its West Texas trunk line from Wink station, in SE NW PSL 32, Block B-5, Winkler County, via the South Ward district to the Yates field, Pecos County, involving 110 miles of eight-inch trunk line.

The company has operated a 195-mile, eight-inch carrier from Wink to El Paso since 1928 in supplying the El Paso refinery of Standard Oil Company of Texas, an affiliated unit, and functions as a common carrier for the nearby plants of The Texas Company and McNutt Oil and Refining Company.

Deliveries to El Paso are currently at capacity load of 20,250 barrels daily, but Standard is dependent upon connecting lines at Wink for a substantial portion of its 14,000-barrel daily requirements that are obtained through purchases and exchange. Standard has about 2500 barrels daily of controlled production and natural gasoline in the South Ward district that is relayed to Wink by the Atlantic Pipe Line Company and 4000 barrels daily in the Yates field. A greater volume is available for purchase on a long-term contract in the latter area.

Mississippi Extension Is Completed by Interstate

Crude oil is now flowing through the Interstate Oil Pipe Line Company's Gwinville extension to the company's Mississippi system, thus completing another step in a construction program started by Interstate last April to provide the state with its first major pipe line outlet.

Completion of the Gwinville project extends Interstate's service from the Mallalieu pool northeast of Brookhaven to the Gwinville pool in Jefferson Davis County. It comprises approximately 35 miles of ten-inch line and an additional 2½ miles of six-inch, extending through the Gwinville pool to gather crude and bring it into the trunk line. Normal capacity of the extension is 43,000 barrels per day. Interstate's Mississippi pipe line network is the connection link between Standard Oil Company (New Jersey) Louisiana division refinery at Baton Rouge and five producing fields in Mississippi as well as two producing areas in Central Louisiana.

Southern terminal of the system is the Maryland Tank Farm near Baton Rouge, where 205,000-barrel storage facilities include one 55,000-barrel and four 37,500-barrel tanks. From this point oil is delivered to the refinery.

Six-Inch Mississippi Gas Line Planned by Two Firms

A project to provide natural gas to nine towns and adjacent rural areas in four Mississippi counties in the east-central section of the state has been announced by the United Gas Corporation and United Gas Pipe Line Company.

The main six-inch line will extend from the United Gas Pipe Line Company's compressor station in Jackson to Philadelphia, Miss., a distance of about 85 miles. The project, which includes laying a main line together with a distribution system within the towns to be served, will cost about $1,200,000.

Dual Completion Permits Cancelled for Texas Field

Cancellation of all permits for dual completions in the Bonnie View field, Refugio County, were ordered by the Texas Railroad Commission last week. At a recent hearing testimony was presented that indicated the producing formations were not satisfactory for this practice. Engineers said that the Upper Greta and Lower Greta sands were so loose that the wells may blow out.

The cancellation order indicates a new policy inaugurated by the commission to tighten control of dually completed wells.

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☆ Oklahoma

Oil Well Is Registered by Hughes County Gas Field

New gas field in Hughes County has oil well; West Velma pool given its best producer; gas pool opened in Washita County; Magnolia's Grady County test near 11,000 feet.

Hughes County: Otha Grimes' Meadors 1, SW SE SE 23-8n-10e, in the gas pool opened recently by Skelly Oil Company southeast of the Yeager pool, started making oil when operators were preparing to test for gas. On a drill-stem test at 3405-35 feet the well showed an estimated 30 million cubic feet of gas. The well was cased to 3405 feet in preparation for testing the gas. When the plug was drilled and well washed in, it started making oil. After being shut down all night, in the morning it began flowing an unestimated amount of oil. Skelly's discovery well in SW NE NW of 26, ½ mile away, showed 10,250,000 cubic feet of gas.

Stephens County: The West Velma pool of Stephens County received its best well to date when Amerada Petroleum Corporation's Sledge 4, NW SE NE 19-1s-5w, flowed 246 barrels of oil in 24 hours through ¾-inch choke. Perforations were from 2628-50 feet, gas volume was 200,000 cubic feet and tubing pressure 50 pounds.

Washita County: A new gas pool has been opened in western Oklahoma near the townsite of Rocky in Washita County by The Atlantic Refining Company and others' Hill 1, NW NW NW 25-8n-18w. With pipe perforated opposite the Springer sand at 6150-85 feet and 6190-6235 feet, the well cleaned out with an estimated 25 million plus cubic feet of gas a day through ¾-inch choke on tubing. Casing pressure was 1500 pounds and tubing pressure 1000 pounds. The wildcat was drilled to 6500 feet and plugged back.

Canadian County: Testing has been resumed on the Fox and Fox Simpson 1, C SE SW 9-14n-5w, wildcat approximately 4 miles northwest of the West Edmond pool and north of Piedmont in Canadian County. The well has been averaging 5 to 6 barrels of oil a day, when tested, from the Bartlesville sand at 7085 to 7100 feet. The wildcat was started in June, 1944, drilled to 7665 feet, tested dry, and shut down. In February, 1945, the operators went back into the hole, drilled to 8385 feet and started testing again. After another shutdown, testing was resumed again in November of last year.

Grady County: Magnolia Petroleum Company's Britt Unit 1, SE NW SW 3-4n-6w, near the Chitwood pool of southern Grady County, is drilling below 10,965 feet. After coring and drilling hard sand at 10,951 feet, operators hit shale, then found another tight sand to 10,962 feet.

Missouri

A blizzard in the area of J. E. Palensky's Wallace 1, SW NW NW 10-65n-36w, held up drilling of the plug and testing of the wildcat. The test has four-inch casing cemented at 2012 feet and total depth is 2017½ feet. An oil show was reported at 2015 feet.

Todd and Leuhring's Benson 1, in NW of 30-55n-29w, Caldwell County, is shut down at 375 feet waiting for casing that has not yet been pulled from a nearby dry hole.

Nebraska

Baxter Drilling Company has staked a test in SE SE NE 5-21-54w, Julesburg Basin area of western Nebraska. Baxter has assembled a block of leases in 21n-54w and 22n-54w, Scotts Bluff County.

Banner Oil, Ltd., is preparing to drill a 6000-foot wildcat on a 30,000-acre block in 19n-56w and 20n-57w in Banner County. Holm Drilling Company has the drilling contract.

☆ Kansas

Small Area Indicated for New Butler County Pool

New Butler County pool expected to cover small area; Lion Oil testing large Harper County block; testing of Mississippi show in Meade County wildcat abandoned; new well in Merten Northeast pool is dry.

Butler County: Only a small area is indicated for the Hickory Creek pool, opened by Nadel & Gussman's Crowley 1, SW SW SE 11-28s-5e. The pool is 1½ miles north of the Fox-Bush pool and the same distance southwest of the Weaver pool. Numerous dry holes have been drilled between Crowley 1 and these 2 pools. The Crowley was completed for 100 barrels of 41-gravity oil per day. The Bartlesville sand was topped at 2692 feet with oil stains from 2700-31 feet. Base of the Bartlesville sand and top of the Mississippi lime was found at 2731 feet with the second pay zone from 2736-38 feet, total depth. Both the Fox-Bush and Weaver pools produce from the Bartlesville sand. It is believed most of the oil from the Crowley 1 comes from the same sand with little if any oil being produced from the second pay zone at the top of the Mississippi.

Harper County: The Lion Oil Company has set surface pipe at Reed 1, SE NW NW 3-33-8w, wildcat west of Anthony, which is testing a 4000-acre concentration assembled by Nadel & Gussman, Tulsa operators. The test will be drilled to the Arbuckle, expected at 5200 feet. Lion Oil holds ¾ interest in the block which covers all of Sects. 32 and 33 and all of 34 except the NW½ in

Wells Completed in the United States in Week Ended March 23, 1946

Data preliminary and subject to revision. Revised and more complete data on all completions shown in monthly summary of drilling, published in second or third issue of each month. More detailed data on wildcats published in third or fourth issue of each month.

State or District	FIELD COMPLETIONS: New Wells *Oil	Gas	†Input	Dry	Total	Old Wells Deepened	WILDCAT COMPLETIONS *Oil	Gas	Dry	Total	ALL COMPLETIONS: This Week	Last Week	Cumulative: This Year	Last Year
Alabama	....	....	....	....	....	....	....	....	....	....	....	....	4	4
Arkansas	....	....	....	....	....	....	....	....	....	....	1	1	36	26
California	30	....	....	3	33	....	....	....	4	4	37	32	418	464
Colorado	1	....	....	....	1	....	....	....	....	....	1	4	22	7
Florida	....	....	....	....	....	....	....	....	....	....	....	....	5	3
Georgia	....	....	....	....	....	....	....	....	....	....	....	1	2	2
Illinois	28	....	1	6	35	....	....	....	4	4	39	29	393	372
Indiana	6	....	....	1	7	....	....	....	2	2	9	3	65	62
Iowa	....	....	....	....	....	....	....	....	....	....	....	....	....	1
Kansas	32	3	1	6	42	2	1	....	5	6	50	34	467	313
Kentucky	....	....	....	....	....	....	....	....	....	....	....	5	96	114
Louisiana	5	1	....	1	7	....	....	....	4	4	11	30	272	206
North Louisiana	4	1	....	....	5	....	....	....	3	3	8	18	141	64
South Louisiana	1	....	....	1	2	....	....	....	1	1	3	12	131	142
Michigan	4	1	....	2	7	....	....	....	3	3	10	23	157	150
Mississippi	....	....	....	....	....	....	....	1	1	2	2	7	53	82
Missouri	....	....	....	....	....	....	....	....	....	....	....	....	4	10
Montana	1	....	....	....	1	1	1	....	....	1	3	5	52	45
Nebraska	....	....	....	....	....	....	....	....	....	....	....	....	....	2
New Mexico	3	....	....	1	4	....	....	....	....	....	4	10	88	115
New York	15	....	10	....	25	....	....	....	....	....	25	26	222	182
Ohio	....	....	....	....	....	....	....	....	....	....	....	19	193	162
Oklahoma	27	2	2	13	44	....	....	1	3	4	48	48	580	510
Pennsylvania	27	....	15	....	42	....	....	....	....	....	42	54	608	603
Tennessee	....	....	....	....	....	....	....	....	....	....	....	....	1	....
Texas	107	10	2	22	141	....	13	....	51	64	205	144	1,790	1,557
E.Tex.Bor. Co.'s	....	3	....	....	3	....	....	....	1	1	4	4	43	17
Rest of E. Texas	10	1	....	1	12	....	....	....	3	3	15	18	114	44
North Texas	23	....	2	8	33	....	1	....	22	23	56	44	500	351
W. Central Tex.	3	1	....	3	7	....	3	....	8	11	18	8	147	81
West Texas	38	....	....	2	40	....	3	....	6	9	49	35	376	419
Tex. Panhandle	1	5	....	2	8	....	....	....	....	....	8	8	105	133
G. Coast, Upper	4	....	....	3	7	....	2	....	4	6	13	10	158	156
G. Coast, Lower	21	....	....	....	21	....	4	....	2	6	27	8	238	228
Southwest Texas	7	....	....	2	9	....	....	....	3	3	12	7	84	110
S. Central Tex.	....	....	....	1	1	....	....	....	2	2	3	2	25	18
West Virginia	4	....	....	4	8	....	....	....	....	....	8	30	151	169
Wyoming	3	....	....	....	3	....	....	....	....	....	3	4	38	36
Total U.S.	293	17	31	59	400	3	15	2	77	94	497	508	5,716	5,197

* Includes distillate wells. † Includes salt water disposal wells.

township 32, range 8 west and all of Sects. 2, 3, 4, and 5-33s-8w. The area has been core drilled and seismographed.

Meade County: Stanolind Oil & Gas Company has abandoned testing the upper Mississippi zone at H. G. Adams 1, SW SW SW 7-35s-29w, just above the Kansas-Oklahoma border in Meade County. The Mississippi was topped at 5845 feet and at one time the well tested several barrels of oil an hour, but all zones were abandoned because of the high water ratio. Tools are now below 6400 feet as operators drilled ahead.

Barton County: One-fourth mile south of the discovery well in the Merten Northeast pool, Vickers Petroleum Company's Howell 1, SE NE SE 36-18s-15w, has been finaled as a dry hole. The well was drilled to a total depth of 3531 feet in the Arbuckle, topped at 3512 feet, 11 feet lower than the discovery well. The discovery well for the pool was Virginia Drilling Company's Howell 1, SE SE NE 36-18s-15w, which was finaled with a potential of 100 barrels of oil per day.

Texas Gulf Coast Area Is Pictured in New Map

A new geological map covering the Texas Gulf Coast from Aransas County on the west to the Louisiana state line on the east, and extending up to Sabine County and across to Guadalupe County on the north, has been prepared by the Statewide Map Company, 1005 Isabella St., Houston. The map has been brought up to February, 1946, and shows all producing oil fields, depleted oil fields, gas fields, sulphur fields and geophysical prospects. Dry holes drilled to date have been plotted, showing well elevations and all paleontological data. The map comes in two sizes, on linen or paper and with or without the five-color scheme designating various type fields. On a scale of 1 inch to 4 miles, the map measures 5 feet by 2 feet; on a scale of 1 inch to 2 miles, the map measures 10½ feet by 4½ feet. All county surveys are plotted and named where possible, and all fields and field prospects are clearly labeled.

12-Mile Iowa Gas Line Is Planned by Northern Natural

Northern Natural Gas Company has authorized the immediate construction of a 12-mile, 20-inch loop parallel to its 20-inch trunk line north of Ogden, Ia. This unit will include a crossing of the Des Moines River.

Standard's Cape Hatteras Project Is Below 5180 Feet

Standard Oil Company (N. J.) Esso 1, at Cape Hatteras, N. C., is drilling below 5180 feet after having successfully completed a fishing job without injury to the hole. This well has now reached a very interesting depth, having definitely gone into the Upper Cretaceous formations and is in a marine sedimentary section in which sands may be encountered at almost any time. Present estimates are that basement rock should not be encountered before around 8500 feet, the contract depth of the well.

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Ellenburger Strike Made on East Side of Permian Basin

Important Ellenburger oil strike registered on east side of the Permian Basin; weathered granite formation underlying Ellenburger in the Keystone field yields prolific gas-distillate flow.

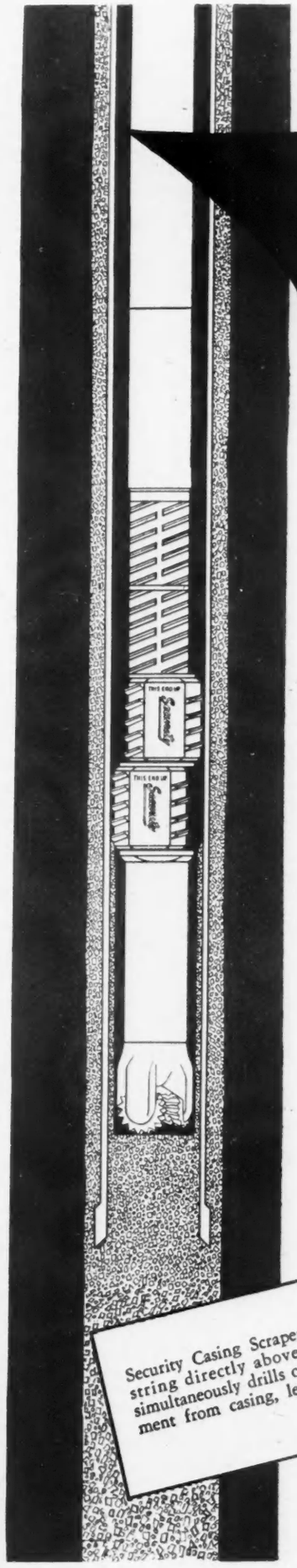
Kent County: Humble Oil & Refining Company's Vick 1, C NW NE H&GN Ry. 45, Block 5, and 7 miles east of the Justiceburg pumping pool, Garza County, opened the first producing area in the county in showing for an Ellenburger well when test was made at 7767-99 feet, and was coring to determine the pay thickness before setting pipe.

A 1-hour drill-stem test yielded gas to the surface within 11 minutes, and the well headed oil while pulling stem. The recovery consisted of 2336 feet of 36.3-gravity oil and 60 feet of rotary mud. This showing is ample to assure completion of a commercial producer. The company holds lease on a large supporting block. Vick 1 entered the San Andres at 1550 feet, Clear Fork at 2680, and the Wichita-Albany at 3480 feet with elevation of 2332 feet. Nominal show of oil and gas was passed up in the Pennsylvanian near the 7600-foot level. It is 10½ miles west by south of the Standard Oil Company of Ohio's Kuteman-May 1, which entered the Ellenburger at 7562 feet with elevation of 2184 feet, and abandoned at 7768 feet without a test.

Keystone Field: Gulf's Keystone 69-E, C NW NW PSL 10, Block B-3, and on the southwest edge of the Ellenburger area, flowed 722 barrels of 53.8-gravity distillate and 7,920,000 cubic feet of sweet gas on 24-hour test of weathered granite at 9650-9710 feet. The flow was through open tubing the first 20 hours and ¼-inch choke the last 4 hours. The regular Ellenburger zone is cased off with 7-inch casing at 9660 feet, and has not been tested. Keystone 69-E is to be deepened to ascertain the thickness of this lower zone, which is considered a source of production along with Ellenburger. For Amon G. Carter and The Pure Oil Company's Walton 1-E and Walton 8-E, nearby producers that have allowable penalties due to excessive gas-oil-distillate ratio. Walton 8-E entered the Ellenburger at 8855 feet, thus being the highest in the field, while Walton 1-E was plugged back to 9688 feet after indicating water in the weathered granite at 9918-58 feet. Gulf's well offers conclusive proof that production is available below the Ellenburger, thus opening a zone that may be productive elsewhere in the district.

Andrews County: The Atlantic Refining Company's University 1-A, 1 2/3 miles southeast of the Ellenburger producer in the Martin 4-pay field, was drilling lime at 8710 feet with the Ellenburger due near this level. This outpost is currently the highest structurally, and passed up flowing sweet oil from the McKee at 8320-8440 feet.

Sun Oil Company's Martin 2, offsetting Clear Fork and Simpson (McKee) producers, was drilling dry lime at 8620 feet to try for completion in the McKee after showing for a high-gravity oil producer from the Silurian at 8014-8151 feet. Skelly Oil Company's University 1-Z, midway between the Martin and Three



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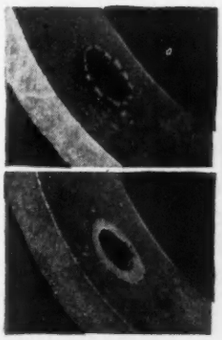

Distinct advantages of the Security Casing Scraper are readily apparent. During rotation, the helical cutting teeth *shear* all protrusions instead of exerting a scraping or crushing action. This positive shearing action is demonstrated by the clean removal of internal burrs left by gun perforating. Note the gun perforations are not burred over but are smoothly removed, retaining full unrestricted opening.

The Cutters are expanded to the full inside diameter of the casing by positive spring pressure and contact approximately 360° of the casing circumference at all times. The multiple spiral teeth cannot pass obstructions *without indicating their presence to the operator.* Every point in the casing is contacted by the cutting teeth which remove each burr and every particle of incrusted cement or other undesirable material by a steady, powerful shearing action. If you like figures, note this: The 7" casing scraper has 24 individual shearing teeth which form a total of 98 linear inches of cutting surface. The teeth act upon an obstruction approximately 800 times under average operating conditions!

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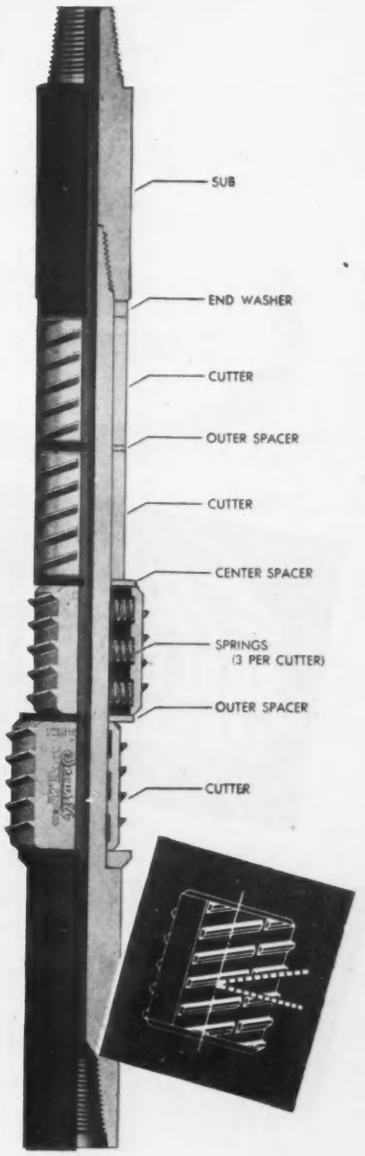

As mandrel rotates, helical teeth produce a shearing action, quickly and cleanly cutting away all foreign materials and undesirable protrusions.

Security Casing Scraper placed in drill string directly above "Cleanout Bit" simultaneously drills out and scrapes cement from casing, leaving walls clean.

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Bar areas, was changing rigs at 7373 feet.

Shell Oil Company and The Texas Company's Ratliff-Bedford 2, southeast offset to their Bedford field 2-pay discovery, was drilling at 10,425 feet, having entered the Montoya at 9935 feet, or 8 feet high. This confirmation well flowed oil when tester was used in the Devonian and also in the Silurian.

Shell's Nelson 1, C NE SE PSL 8, Block A-40, 1¼ miles east by north of a 10,929-foot granite failure and higher structurally, was drilling lime and shale at 10,250 feet.

Mid-Continent Petroleum Corporation's Lotus 1, C NE SE PSL 17, Block A-48, ¾-mile northwest of the South Fullerton-Devonian field, entered the San Andres at 4420 feet, or 10 feet high, and was drilling at 6100 feet. The 7000-foot Clear Fork zone has been found productive by 3 tests in this area, and it may surpass the Devonian in importance, although it is being temporarily passed up.

Gaines County: Amerada Petroleum Corporation's Jones 1-C, ¾ mile southeast of its Jones Ranch field discovery, entered the Devonian at 11,191 feet, or 24 feet low. First porosity was logged at 11,192 feet and drilling was halted at 11,400 feet to set 5½-inch casing at 11,399 feet before deepening about 150 feet, or through the lower pay. The discovery flowed oil and water from the lower zone. The company's Jones 1-B, ½ mile west of the district's record-depth discovery and high structurally, was drilling at 10,760 feet.

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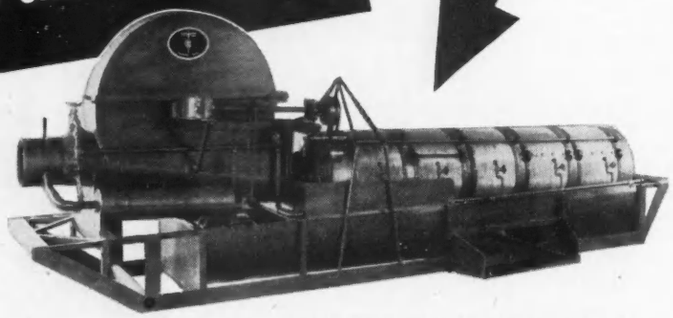

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Reeves County: Argo Oil Corporation's Roberts 1, 7¾ miles northeast of Saragosa and a 10,000-foot project, was making a drill-stem test at 9962 feet in lime and sand. An unsuccessful try was made to test oil-stained lime at 9941-45 feet. The Leonard, or Basal Permian, was entered at 7840 feet. Continental Oil Company's Collier 1 was abandoned in Delaware water sand at 5377 feet.

Sutton County: Shell's Wilson 1, TW &NG Ry. 38, Block B-14 and 20 miles south by west of a wildcat gasser, nearest production, resumed drilling in dry dolomite at 5101 feet, possibly in the Ellenburger, after testing dry at 4890 feet and at 5090 feet.

Winkler County: Sun Oil Company's Wheeler 2, southwest edge of the Wheeler 3-pay field and confirmed for a flowing producer in the 8500-foot Devonian, failed to flow after using 500 gallons of acid in Ellenburger open hole at 10,586-10,630 feet. The hole was deepened 5 feet, and second acid treatment was under way. The fluid level is ample to make a producer from the lower zone. Phillips Petroleum Company is starting T. P. Land Trust 1-G, C SW SW T&P Ry. 11, Block 46, T-1-S, being ½ mile east of production and in Ector County. Cities Service Oil Company is starting Wheeler 1, C SW NE T&P 10, offsetting the most northeastern Ellenburger well.

Crane County: Atlantic's University 1-F, ½ mile east of its Block 31 field dual-pay discovery, entered the Ellenburger at 10,340 feet, or 44 feet low, and recovered 4150 feet of oil when tester was used at 10,450 feet. The Devonian correlated 110 feet low. The company's University 1-G, ¾-mile southeast of the discovery, cemented 7-inch at 10,404 feet to dual complete also.

Ector County: Phillips' Eidson-Scharbauer 1, ¾ mile west of the north end of the Penwell field and an outstanding Ordovician prospect, was drilling lime at 8195 feet in Simpson, topped at 7960 feet, or 528 feet high to a 9675-foot Ellenburger failure 2¼ miles southwest. It has gained structural position since encountering a thin section of Devonian, and showed some promise of production in the Silurian. John W. Murchison et al's T. P. Land Trust-Texaco 1, C SE NW T&P Ry. 7, Block 45, T-2-S, wildcat on a strike with this prospect and the TXL field, entered the Yates at 2655 feet with elevation of 3070 feet, and was drilling at 3330 feet.

Vagtborg and Kemler to Speak at Compact Meet

Dr. Harold Vagtborg, director of the Mid-West Research Institute, Kansas City, Mo., and Dr. E. N. Kemler, head of the Research and Engineering Division of the Southern Research Institute, Birmingham, Ala., will be the principal speakers at the public session Saturday, April 13, of the Interstate Oil Compact Commission. They will present papers on the advancement in research in the uses of crude petroleum and natural gas with special emphasis on the development of new by-products from these two natural resources.

Dr. E. P. Weidlein, director of the Mellon Institute, previously scheduled to appear, will not attend.

The compact's quarterly meeting is slated April 11-13 at Tulsa.

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☆ North Texas

Montague Test Has 32 Feet Of Effective Conglomerate

Montague County test has 32 feet of effective conglomerate pay; Belcherville field expanded westward. Foard County wildcat passes up promising oil show to explore the Ordovician beds.

Montague County: L. S. Youngblood and Robert L. Foree's Joe Benton 2, Abel A. Lewis Survey, A-420, and 3 miles northwest of Stoneburg, was in process of completion at 6243 feet after flowing oil through tester from conglomerate at 6136-68 feet in Bend, topped at 6058 feet with elevation of 915 feet. This discovery yielded gas to the surface within 2 minutes and flowed oil in 15 minutes on the preliminary test, while bottom-hole pressure was calculated at 3050 pounds in 10 minutes. It correlates 42 feet high to a 6198-foot failure drilled by the operators in December, 1942, ¼ mile southwest. Designated as the Caudle prospect, the owners have 1100 acres in the area.

Magnolia Petroleum Company's Mitchell 2 extended the Belcherville field a location west and became the seventh consecutive producer in flowing 912 barrels of 46.6-gravity oil, with gas-oil ratio 935/1, on natural potential test through ¼-inch choke from perforations at 5340-60 feet in conglomerate. The Bend lime was entered at 5391 feet.

Foard County: Magnolia's Steele 1, NW SW SW H&TC Ry. 307, Block A, 7 miles southeast of Crowell, was drilling lime and chert at 5575 feet in Mississippian, topped at 5344 feet with elevation 1361 feet. This wildcat recovered 30 feet of oil and 80 feet of oil-cut mud from Bend conglomerate at 5322-30 feet, and a second test at 5336 feet yielded 98 feet of oil-cut mud. The Mississippian proved barren.

Clay County: L. T. Burns et al's Ford 1, ⅜ mile northwest of the Heard field discovery, was waiting swabbing unit after showing oil and gas through mud following perforations at 5751-61 feet in Bend. This test is 46 feet low on the Bend, and found the Ellenburger barren in drilling to 6701 feet. Panhandle Refining Company's Segler 1, Lot 16, W. A. Farris Survey and a mile northwest of Ford 1, entered the Bend at 5707 feet, or 2 feet high, and was drilling at 6100 feet.

Frank P. Cullum et al's Stine-Barnsdall 1, SEc H&TC 24, Block 4, Spring sector of the Ringgold field, flowed 1716 barrels of 47.6-gravity oil natural through ½-inch choke from saturation at 5583-5600 feet in the Bend, topped at 5528 feet.

Water Injection Topic of Texas Commission Hearing

The Texas Railroad Commission has scheduled a hearing, first of its kind, for April 3, at Wichita Falls. Oil operators in the area are called upon to appear and "show cause why the large quantities of water now being produced . . . should not be returned to the ground through injection wells . . . and . . . why the wells and leases causing contamination . . . should not be closed in until such practice is stopped."

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☆ East Texas

Rusk County Gas-Distillate Discovery Officially Gauged

Official gauge taken on gas-distillate discovery in Rusk County and first oil strike in Opelika area; Bowie County's Smackover discovery increases gas-distillate yield after acid treatment.

Henderson County: Lone Star Producing Company's Buckalew 1, northwest flank of the Opelika gas-distillate field, has been dually completed as the first oil producer with gas from the regular Pettit zone. This outpost flowed 330 barrels of 41.9-gravity oil, with gas-oil ratio 1228/1, on official test through ¼-inch choke from Rodessa perforations at 8827-53 feet. Pettit zone perforations at 9351-89 feet yielded 35 million cubic feet of gas daily on open flow with 12 to 15 barrels of distillate per million feet. Lone Star's Hearne-Magnolia 1, J. E. Clancy Survey and a projected oil test for the north flank, was drilling at 5795 feet, having entered the Georgetown at 5540 feet.

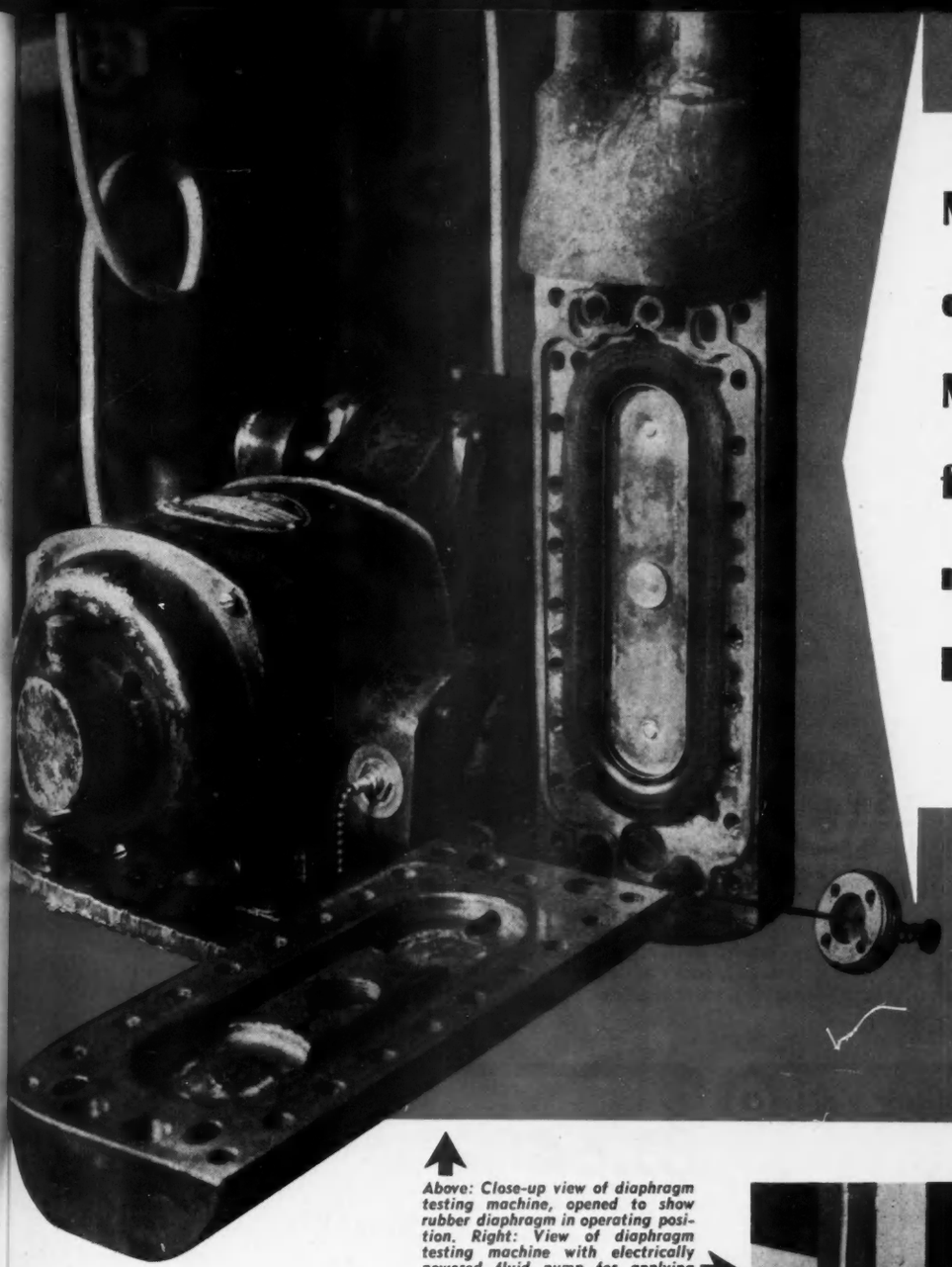
Wildcats: Delta Drilling Company's Martin 1, A. T. Flowers Survey and a Travis Peak test, entered the Georgetown at 5400 feet, and was drilling lime at 5440 feet. In Anderson County, Humble Oil & Refining Company's Freeman 1, Brushy Creek prospect was drilling shale and lime at 11,650 feet. No shows have been recorded since logging gas pressure in the James at 10,545 feet.

Bowie County: Barnsdall Oil Company et al's Pickering 1, which has been showing for a Smackover discovery in the Texarkana area, flowed 85 barrels of 69.6-gravity distillate, with gas-distillate ratio of 52,000/1 and bs&w content ranging up to 10 percent, when produced through 20/64-inch choke. This flow followed treatment of lime at 7038-94 feet with 2000 gallons of acid. Owners plan to deepen, although it was credited with having reached igneous rock.

Cherokee County: Tex Harvey Drilling Company's Reitsch 1, O. Weir Survey and near the southwest corner of Rusk County, was rated at 500,000 cubic feet of gas with trace of distillate daily on 10/64-inch choke. This wildcat is producing from Woodbine perforations at 4350-51 feet.

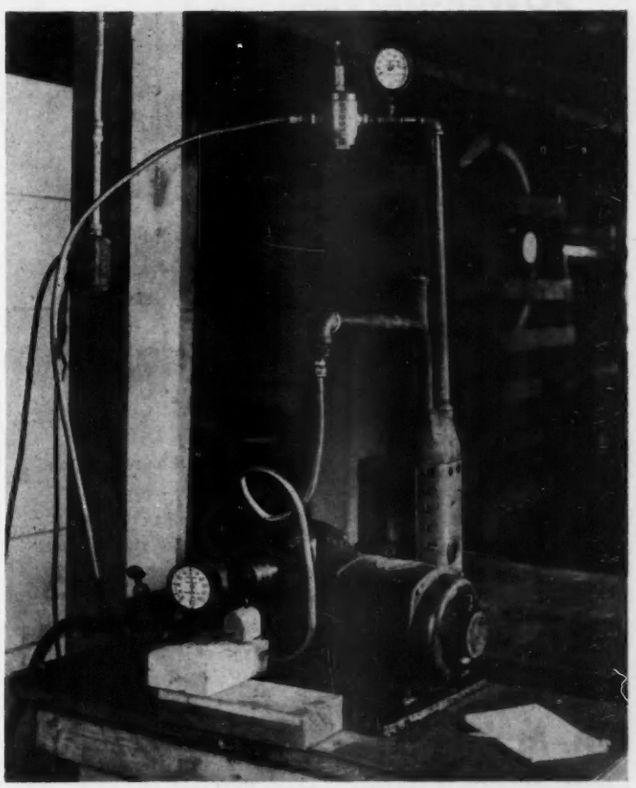
Rusk County: Delta Drilling Company and The Chicago Corporation's Rayford 1, James Smith Survey and a discovery 2 miles south of Henderson, flowed 20 barrels of 61-gravity distillate and 2 barrels of salt water, with gas-distillate ratio of 52,000/1, through 3/16-inch choke. Production is from 4 zones of perforations in the Travis Peak between 7310 and 7464 feet. An unsuccessful attempt was made to dual complete from the Pettit.

Failures: M. N. Massad et al's Whittle 1, a mile north of Point, Rains County, entered the Woodbine at 3860 feet, and quit in water sand at 3936 feet. In Navarro County, Tex Harvey Oil Company's Jackson 1, southwest edge of Angus, logged barren Woodbine at 2860-90 feet, and quit at 3093 feet in Georgetown, topped at 3060 feet. John R. Bunn et al's Weatherby-Magnolia 1, Wade H. Walters Survey and a mile southwest of New Salem, tested water at 3976 feet in Woodbine, topped at 3889 feet, with elevation of 287 feet.



Murray Rubber diaphragm for McEvoy Gas Lift flexes nearly a million times in Destruction Test!

Above: Close-up view of diaphragm testing machine, opened to show rubber diaphragm in operating position. Right: View of diaphragm testing machine with electrically powered fluid pump for applying flexing pressure to the diaphragm.



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Wood County: Humble Oil & Refining Company's Russell 1, Lot 8, Block 21, Blackburn Addition of George Brewer Survey, Hawkins field, was junked at 3698 feet after drilling into Roy Laird's Blackburn 1, a Woodbine producer situated 32 feet northwest.

☆ East Texas Border

Harrison Test Shut in for Gauge and Completion

Harrison County test 3 miles northwest of Elysian Fields shut in for completion as gas distillate producer; wildcat near Huxley, Shelby County, gauges gas-distillate; Joaquin wet gas field well finals as gas producer.

Harrison County: R. W. Williams' Furrh Estate 1, Frances O'Neal survey, 3 miles northwest of Elysian Fields, which a few weeks ago showed 30 barrels of oil daily on test in Travis Peak, was shut in awaiting gauge and completion as a gas-distillate producer. After being shut in several days the well was opened and blew mud and water into separator, disconnected, and, cleaning itself out, was estimated to be producing between 5 and 6 million cubic feet of gas per 24 hours, with little oil. Considerable improvement since the test was shut in for installation of separator and tanks was reported by operators.

Marion County: Magnolia Petroleum Company's Orr 1, Fowler survey, 3 miles southwest of Avinger, northwest Marion County's Travis Peak oil discovery, was reported coring at 10,390 feet in sandy shale, with no shows given. M. A. Freeman's Stephenson 1, Perry survey, 2 miles northwest of Jefferson, squeezed perforations at 7180 feet after salt water was obtained on test, and perforations again are planned.

Rogers Lacy and Allied Oil Company's DeWare 1, Walker Survey, northwest outpost in the Jefferson area, was reported to have picked up the anhydrite at 5302 feet and is drilling.

Shelby County: Southern Production Company's Childress 1, Thomas Bristow Survey, finaled at 4996 feet in the Joaquin wet gas field, near the state line, as a gas producer, yielding 160 million cubic feet from casing perforations at 4960-90 feet. No accurate gauge was reported on the gas distillate flow accompanying gas production. Acid treatment was applied.

Humble Oil & Refining Company's discovery, Pickering Lumber Company 1, St. Francois Survey, 9½ miles east of Shelbyville, gauged 18 barrels of 57-gravity distillate and 1,836,000 cubic feet of gas per day on 3/16-inch choke. Tubing has been run and the well was cleaning itself into pits. Production is from 6606-28 feet through 132 perforations in the Pettit section.

☆ South Central Texas

Humble's Prospective Field Opener Continues to Swab

Humble continues to swab new prospective field opener in Atascosa County; Amerada cores ahead in likely field prospect for Gonzales County; Milam County wildcat pumps oil from shallow Austin chalk.

Atascosa County: Humble Oil & Refining Company's A. N. Moursund 1, near the Schorsch 1, gas discovery well in the Jourdanton field, Edward Estes Survey, was swabbing in the Edwards lime after drilling to 7382 feet and resetting tubing and packer. A previous 24-hour test was made at 7378 feet on a 1/16-inch choke which gauged only 24 barrels of fluid, mostly wash water with a gas-oil ratio 3586/1. The well was then killed and the tubing pulled to drill the additional 4 feet before the second try.

Gonzales County: Amerada Petroleum Corporation's Henderson et al Unit 1, wildcat in the James Gibson Survey A-23, 5 miles southeast of Waelder, and promising field opener, made a drill-stem test at 8773-79 feet, recovering a small amount of salt and sulphurous water. The well was then washed clean and cored ahead.

Milam County: R. L. Holcombe et al's J. L. Byrd 2, wildcat in the J. J. Acosta Grant and 468 feet northeast of the Byrd 1 dry hole and 1 mile northeast of Sharp, was reported to have pumped 55 barrels of clean oil per day from the Austin chalk after setting 2-inch tubing at 1240 feet. The Austin chalk was topped at 1210 feet and the well was drilled to 1884 feet with 5½-inch casing set at 1220 feet.

Zavala County: Humble's I. T. Pryor 2, wildcat 3½ miles southeast of La Pryor on a 30,000-acre lease in the Pedro de Aguirre Grant, was reported drilling in hard shale below 4798 feet. On 2 previous drill-stem tests made at 2939-47 and 3036-47 feet, only drilling mud was recovered.

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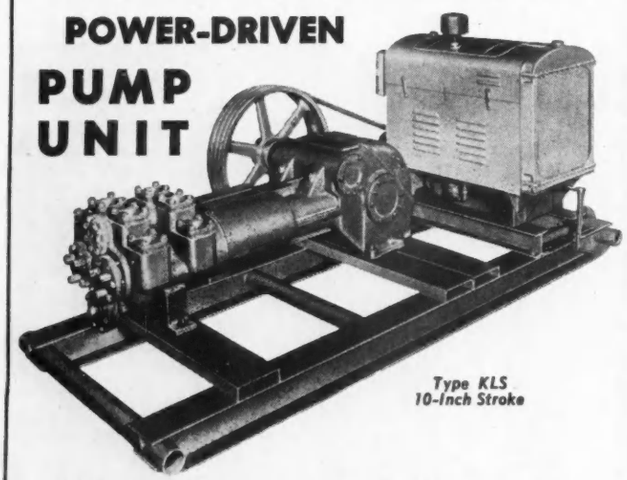

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☆Lower Texas Coast

Amerada's Wildcat North of Arnim Field Cores in Shale

Wildcat north of Arnim cores in shale; Continental builds flow tanks for test on South Cabeza Creek well; Live Oak County wildcat waits on orders.

Fayette County: Amerada Petroleum Corporation's G. L. Brown, Jr., et al 1, wildcat 3½ miles north of Arnim field, on a 568.6-acre tract in the Jacob Stiffler Survey 6½ miles northwest of Flatonia, was last reported coring in hard shale and sandy shale below 1718 feet.

Goliad County: Continental Oil Company's S. H. Reed 2, T. S. Nelson Survey, 1100 feet southwest of Bethke 1, was flowing into pits on a 5/32-inch choke after perforating with 12 shots at 8323-26 feet. On a 20-minute drill-stem test at 8323-29 feet, where cores showed oil saturated sands, 1320 feet of oil and 30 feet of mud were recovered. Total depth of the well is 8329 feet and has 7-inch casing set to bottom. The Pettus sand was topped at 4535 feet.

Continental's Mrs. Lottie Shaper 1, 1200 feet northwest of the Bethke 1 well in the South Cabeza Creek field, was flowing 2 barrels of condensate per hour on a 3/16-inch choke with an estimated flow of 1,602,000 cubic feet of gas daily from perforations at 8045-60 feet. Several squeeze jobs were conducted above and below this level, the first being at 8034-46 feet, then at 8033-60, 8365-70, 8357-65, 8345-58 and 8198-8214 feet. Total depth of well is at 8371 feet with 6-inch casing set at bottom.

Live Oak County: Altex Well Servicing Company's Schmidt Heirs 1, wildcat on a 640-acre lease in the Sam Owen Survey 132, 12 miles northeast of Three Rivers, set 10¼-inch casing at 50 feet and ran an electrical log to 1300 feet. After drilling to 1650 feet the well was shut down for orders.

Nueces County: Mosser, Anderson & Kirkwood's H. V. Fuchs 1, wildcat on a 110-acre lease in the F. Z. Bishop Subdivision of the Palo Alto Grant, Sect. 178, 4 miles northwest of Bishop, ran an electric log at 6225 feet and was last reported drilling below 7150 feet. This is an Humble farmout.

Unitization Is Requested By Benton Field Operators

Evidence showing need for unitization of the Benton field, Bossier Parish, Louisiana, and proof that the new field is of the type readily adaptable to cycling was presented to the State Conservation Board in Shreveport, March 14. The area proposed for unitization comprises 10,000 acres. Production has been found in the "D" and Bodcaw sands of the Cotton Valley series.

A cycling plant planned for the area will maintain the field pressure for a period of from eight to 12 years.

Representatives of Barnsdall Oil Company, Sohio Petroleum Company, Grady H. Vaughn and Ed Hurley, operators, and a committee of royalty owners attended the hearing. No opposition to unitization was expressed although royalty owners indicated differences in the contract offered them would have to be settled before final acceptance.

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☆Upper Texas Coast

Mud Weight Hiked to Combat Raccoon Bend Deep Gas Blow

Humble increases mud weight to combat deep gas blow at Raccoon Bend; Olive area confirmation test cores thin sand section; Brazoria County wildcat sets pipe after extensive fish job; dual completion made at Needville; new sand indicated at Sugar Valley field.

Austin County: Humble Oil & Refining Company's Luther R. Sherrod 16-Y, deep test in the Raccoon Bend field on a 200-acre lease in the Wm. C. White Survey A-101, which attempted to blow out early last week, was reported gassing a little through a 14.5-pound mud. Last log was run to 9774 feet before setting 9⅝-inch protective casing at 8843 feet. Last tests made before the blow while drilling at 11,018 feet were made at 8786-8801 feet where 60 feet of drilling mud was recovered showing some oil and gas.

Hardin County: Pan American Production Company's Oliver Sternenberger Lumber Company 2, confirmation test in the Olive discovery area, J. Landis Survey A-328, Sect. 6, 2665 feet northwest of the discovery well, cored through shale with on shows reported at 10,208 feet. Partial recoveries of cores showing sand streaks were made to 10,179 feet, but nothing was found to indicate a solid sand body. The well is projected to 12,000 feet.

Brazoria County: Humble's Minnie W. Mettler et al 1-B, 7250 feet north of production at Angleton and in the J. W. Cloud Survey, Abstract A-169, has perforated at 11,210-218 feet with 32 shots after setting 5½-inch casing at 11,340 feet. While drilling at present depth of 11,597 feet, the well kicked and the drill pipe became stuck, which resulted in almost a month's fishing job. The hole was reamed before setting casing.

Fort Bend County: British-American Producing Company et al's Hurta et al 4, Robert Hodge Survey A-33, Needville field, has been dually completed as a gas and oil well. With a total depth of 6801 feet, 5½-inch casing was set to 6350 feet and perforated with 24 shots at 5914-20 feet in the oil sand which was topped at 5914 feet. The oil well has a potential of 166.56 barrels of 27-gravity oil, no water, per day on a ⅛-inch choke with tubing pressure 1125 pounds. Gas-oil ratio was estimated at 807/1. The gas well was completed with 23 shots at 5732-36 feet to flow an unestimated amount of gas and developing a casing pressure of 2280 pounds. The gas sand was topped near 5700 feet.

Chambers County: McCarthy Oil & Gas Corporation's Francis Hepler 1, wildcat on a 40-acre tract in the F. Valmore League A-54, Theo F. Koch Subdivision and about 2500 feet southeast of the Jobes 1 well, was reported testing through new perforations after an unsuccessful test through perforations at 8726-28 feet and at 8728-30 feet. However, at both depths, good pressure indications were recorded and oil with salt water was recovered from drill-stem tests.

San Jacinto County: Fred M. Manning, Inc.'s Central Coke & Coal Company 1, wildcat 15 miles southwest of Sheppard and 2½ miles southwest of the Mercy field, J. Ferguson Survey, A-119, has been completed for a small gas producer, and credited for a new field opener in the area. Production comes from 344 perforations at 8310-45 feet, about the same producing horizon encountered in the Mercy field, and the well makes 14.19 barrels of 50.2-gravity condensate daily through 13/64-inch choke with 260 pounds pressure on tubing and 725 pounds pressure on casing. Gas production is estimated at 285,000 cubic feet daily. The well was drilled to a total depth of 11,001 feet and when 4½-inch drill pipe became stuck at 10,714 feet, it was cemented at that depth and perforated.

Matagorda County: The Superior Oil Company of California & John H. Blaffer's Sadie E. Thomasson 1, 2400 feet northwest of the Culbertson 1, P. Burnett & A. S. Sojourner Survey, Abstract 13, in the Sugar Valley field, was reported dually completing for a new oil sand. The well was perforated at 8762-72 feet for a gas completion and perforations in the new oil sand at 9083-86 feet for oil production.

Penn Grade Association Sets Convention Dates

Pennsylvania Grade Crude Oil Association will hold its twenty-third annual convention, the first since 1944, at the William Penn Hotel, Pittsburgh, June 27-28, the directorate has decided.

☆South Louisiana

California Opens Oil Field In Lafitte Village Vicinity

California Company opens oil field in Lafitte Village area; Atlantic starts first of 3 wildcats staked in Lake Pontchartrain; Bon Air confirmation well testing for production; Angie area wildcat sets protective pipe; no shows at Smith Ridge to 11,700 feet; Continental continues fish job on St. Martinville wildcat.

Jefferson Parish: The California Company has completed E. P. Brady et al 1, wildcat in the Lafitte Village area 5 miles east of the Barataria field, 66-16s-24e, for a new field opener with a flow of 300 barrels of 38.9-gravity oil. Completion depth details have not been revealed, but it is believed to be in the 9300-foot level. Production is on a 9/64-inch choke developing 1400 pounds flowing pressure on the tubing and making a gas-oil ratio of 343/1. Total depth is 10,680 feet with 5½-inch pipe set for protective string.

The Atlantic Refining Company has begun its State 1-C, wildcat in the Metairie area on State lease 318, Unit 3, Block 8, seeking productive sands at the 12,000-foot level below Lake Pontchartrain. O. W. Dyer has the contract on this and two other wildcats to be drilled in the lake; one in Orleans Parish and the other in St. Tammany Parish.

Jefferson Davis Parish: Sohio Petroleum Company's Claudius Fontenot et al 1-B, confirmation test to the company's Bon Air disovery well, west offset in 15-10s-6w, was reported making production tests. Drilled to 9750 feet, 5½-inch pipe was set at 9736 feet and perforated and squeezed at 9710-13 feet. Pipe was perforated at the same level of the dis-

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covery well at 9694-9704 feet for the production test.

Washington Parish: Humble Oil & Refining Company's Gaylord Container 1-B, wildcat south of the Mississippi state line in the Angie area, 42-1s-14e, has cemented 9⅝-inch protective pipe at 6383 feet with total depth 6395 feet. Proposed depth was 11,500 feet.

Cameron Parish: Sohio's Matilda Gray 1, wildcat on the Smith Ridge prospect, 12-15s-12w, was reported drilling at 11,700 feet after running an electrical log to that depth with no oil shows indicated.

Continental Oil Company and Sohio's Cameron Parish School Board 1, wildcat in the Johnson's Bayou area, 16-15s-14w, was running electrical log after drilling to 9302 feet. Sands cored at 9008-12 feet showed a gas odor. Seven-inch pipe has been set to 8625 feet.

St. Martin Parish: Continental's Marcelite G. Fournet 1, wildcat 6700 feet north of the St. Martinville field production, 113-10s-6e, continues to cut and pull drill pipe with top of fish last reported at 9298 feet. Last log was run at 12,004 feet with no oil shows indicated and total depth at time drill pipe became stuck was 12,375 feet. Protective pipe of 9⅝-inch was set at 9520 feet.

Plaquemines Parish: Gulf Refining Company's Eugene DeArmas et al 1, Grand Bay area wildcat, 57-20s-18e, a proposed 12,000-foot Miocene test, was reported drilling in shale at 11,959 feet. A log was run to 9297 feet with no oil shows indicated. However, a water sand was shown at 8943-9015 feet, which is reported as running 750 feet low to the field. Nine and five-eighths-inch casing was set at 9290 feet.

☆ North Louisiana

Querbes' Caddo Parish Test Completes as Flowing Well

Querbes' Caddo Parish test makes small flowing well; Benton field discovery continues drilling wildcat after fishing job.

Caddo Parish: Union Producing Company's Fly 1, Mooringsport area, 16-19-16w, reported the previous week drilling in shale, lime and anhydrite at 4145 feet, cored from 4800-09 feet, with no report of the results and is drilling below 4994 feet. It is that area's second wildcat. Same operator's Noel Estate A-1, 11-19-16w, Longwood area, was still swabbing with some oil and gas show reported after perforating at 5697-5710 feet.

J. R. Querbes' A. J. Mitchell Estate 1, 8-18-16w, was reported flowing approximately 15 barrels per day. Phillips Petroleum Company's Waskom 1, 29-19-16w, was still testing at 5982-94 feet.

Bossier Parish: Barnsdall Oil Company's Crystal 1, 28-21-11w, wildcat, Benton field, which had a fishing job under way at 8185 feet, was continuing drilling. Same operator's wildcat, Carter-Burton 1, 26-23-13w, Plain Dealing area, continues coring below 9001 feet.

Union Producing Company made a new location in the Sligo field, 1327 feet west, 100 feet north SEc 19-17-11w, for the Sheppard Unit A-3, which will drill to 5400 feet.

Claiborne Parish: Hassie Hunt's Davis Unit 1, 4-21-4w, was reported completed at 7770 feet, with on announced report on findings.

Sabine Parish: Panhandle Refining Company's E. E. Meshell 1, 22-7-14w, perforated casing at 2480-2500 feet, acidized, testing salt water, set retainer, perforated at 2180-2200 feet, and was reported unofficially to be flowing an estimated 400 barrels of oil daily. Production was shut in waiting on tanks, and gauge will be taken later. Total depth is 2200 feet.

Lincoln Parish: The California Oil Company's Ida Rogers Richardson 1, 11-18-2w, was drilling at 9320 feet. Same operator's W. A. Colvin 1, 1-19-4w, was drilling at 6774 feet.

Morehouse Parish: Union announced location of Montgomery 1, wildcat in the Beekman area, approximately in the geographical center of NE NW 6-22-6e, with projected depth 3800 feet.

☆ Arkansas

Three Oilers Completed in Ouachita's Wesson Field

Three oilers completed in Wesson field, one after abandonment; new wildcat mile east of Wesson production may join that field and Gum Creek field.

Ouachita County: McAlister Fuel Oil Company completed C. M. Wesson B-4, SW SE NW 24-15-19 from Glen Rose sand at the 2600-foot level; C. M. Wesson A-2, SE NE SW 24-15s-19w, from Travis Peak at 3075 feet; and also N. R. Hogg 2, NE SE SW 24-14-19, in Travis Peak with casing perforated at 3030-63 feet. This last test was abandoned in

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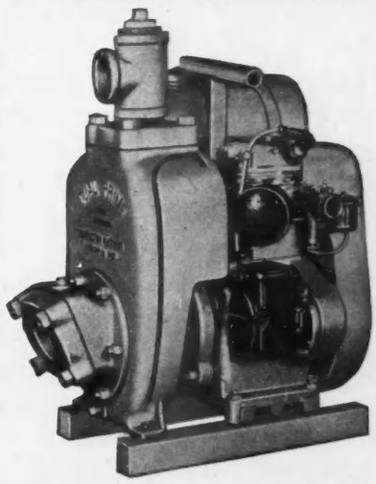

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November 1945 after drilling to 3000 feet. None of this trio has announced a gauge, but each, it is estimated, will make more than the field's allowable of 100 barrels daily, flowing with good pressure.

In the same Wesson field, Lecher & Hill reworked R. W. Wesson 1, NE NE NE 25-15-19, with a good producer considered assured. Several weeks ago this test was reported abandoned.

A mile east of the Wesson field, Paul Mosebach's wildcat, F. S. Foster 1, SW SW NW, 20-15-18, is rigging up. If successful it will practically unite the Wesson and the Gum Creek fields. Foster and Green are moving in to drill Emma Campbell 1, NE NE NW 10-15-19, a wildcat.

Columbia County: R. H. Crow's J. F. Smart, G-2, NW SE NE 13-15-20, Smart field, is waiting on cement. Same operator is moving rig to drill a wildcat test, Douglas Whitaker's Bank of Stephens (Clyde Whaley) 1, NE NE SW, 16-15-19, 1 mile north of Stephens.

Stephens field is the center of more activity, due to new locations and wildcat tests, than it has seen since the early 1920's, it is reported.

Ashland Oil & Refining Company's Bond Unit 2, SE 10-17-19, Village field, has set pipe at 7403 feet, with test for completion scheduled soon. McAlester Fuel Company's D. E. Rogers A-1, 10-17-19, Village field, was drilling at 7386 feet, expecting to set pipe for a test this coming week.

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Is the U.S. Muffing the Ball in the Antarctic?

In the next International Feature Issue of The OIL WEEKLY (April 1) be sure to read **"Oil In Antarctica"** by Dr. F. Alton Wade. In this thought-provoking article Dr. Wade, geologist and veteran of two South Pole expeditions, urges the U. S. government to undertake large-scale exploration of the petroleum potentialities in this region.

"The time to act is now," asserts the scientist, "before other nations do so. Alaska was called 'Seward's Folly' at the time the United States purchased it. Greenland could have been ours but the chance was passed up. Now we are sorry. Antarctica may be another Alaska. We cannot afford to miss such an opportunity as is presented to us today."

As a major in the Air Corps, Dr. Wade was in command of the Ice Cap detachment in Greenland during 1943 and 1944. Greenland is the only other area on earth presenting problems comparable to those in Antarctica. Ice cap coverings are similar.

Read your next week's issue of The OIL WEEKLY.

Union County: Barney Dunlap's M. H. Nash 1, NW SE, 7-17-13w, Rainbow field, has been put on pump, but no gauge yet available. At Smackover, J. E. Berry is testing Eke Murphy 1, SW SW, 8-16-15w, after installation of a worker rig. During retest it had a show of salt water and small amount of oil around 2350 feet.

Texas Line Completed

South Plains Pipe Line Company has completed 1½ miles of three-inch discharge line from the southeast portion of the Levelland field, Hockley County sector of West Texas, to the Levelland refinery of the Consumers Co-operative Refinery Association. The latter utilizes the South Plains system in supplying the bulk of its crude requirements from the Slaughter field.

☆ Mississippi

Magnolia Completes Good Gasser for Warren County

Magnolia completes good gasser in Warren County; new Tinsley producer is best of current crop for field; Lincoln County deep test abandoned.

Warren County: Magnolia Petroleum Company's Ruth Pidgeon 2, SWc SE SE 27-17n-4e, has been completed for a good gas producer to mark the county's first commercial discovery. The well is producing from several different sections of gas sand at the 2000-foot level. Casing was set to 2127 feet and perforated at 2036-42 feet to tets a good flow of dry gas. Subsequently, tubing was run to 2066 feet and after being shut in for 24 hours the well produced at calculated open flow rate of 7,200,000 cubic feet of gas per day. Tubing pressure was 750 pounds on ⅛-inch choke. Surveys have indicated that this area is favorable for oil traps and the Pidgeon discovery will lend impetus to further exploration of the vicinity. The county has had 37 tests drilled to every potential productive level but all were abandoned, although a few did report shows of oil and gas.

Yazoo County: Hassie Hunt's Lammons A-1, 1-10n-3w, which was drilled deeper to produce from a new horizon, is reported to be the best producer Tinsley field has had in months. This well was the discovery for the Lammons sand in the early days of Tinsley field. Later, when production dropped off, it was drilled to produce from the Perry and Woodruff sands at the 5000-foot level. Several months ago Sohio Petroleum Company deepened Brumfield A-1 to discover a new oil sand which it termed the Brumfield at the 5700-foot level. Several offsets, including the Lammons A-1, were immediately drilled and all produced but none as well as the Lammons. The sand section is reported running higher on structure than the discovery well, and is considerably thicker than Brumfield sections encountered in the other well. Gravity of the oil produced is 52, which is higher than that of the other wells drilled.

Adams County: Phillips Petroleum Company's Davey 1, 46-8n-2w, wildcat which is troubled with salt water in its effort to make a commercial producer, is flowing approximately 8½ barrels of fluid an hour, of which about 25 percent is oil, after acidizing formation and

swabbing in. The California Company's Ella G. Lees 9, 45-7n-1w, Cranfield field, has reached the producing zone in the Massive sand and set casing to 10,361 feet for production test after running electrical log. California's L. A. Whittington 4, 44-7n-1w, Cranfield, is setting 7-inch casing after reaching Massive sand at 10,371 feet.

Franklin County: Gulf Refining Company's Ella Lees 3, SWc 32-7n-1e, which is attempting to extend Cranfield production eastward across the county line, is running casing after entering the Massive sand at 10,360 feet. Cores taken at 10,376-388 feet recovered porous sand saturated with oil.

Lincoln County: Danciger Oil & Refining Company's Central Lumber Company 1, SWc 22-8n-5e, deep wildcat, has been abandoned in the Comanchean zone at 10,673 feet with no shows and the Massive sand horizon showing considerable salt water content.

Sun Oil Company's Case Heirs 1, SW SE 8-7n-7e, in the Brookhaven field, has been completed for a 100-barrel-a-day producer. Casing was perforated at 10,273-90 feet opposite the Massive sand zone and swabbed in. Initial production was 105 barrels of 30.6-gravity oil per day.

Greene County: Humble Oil & Refining Company's Harry Stover 3, Byrd Dome test, is running core tests below 8143 feet. Cores from the 8000-foot level recovered only gray sand with no shows.

Florida

O. D. Robinson's State Well 1, 29-59s-40e, Monroe County, deep test, is shut down for orders at 10,450 feet. A drill-stem test after the section was acidized failed to develop shows which were made earlier. Gulf Refining Company's State 1, 2-67s-29e, is bottomed temporarily at 4585 feet while it fishes for tools. No shows have been reported.

Osceola County: Humble Oil & Refining Company's Carroll 1, C SE SE 10-27s-34e, set 20-inch casing to 265 feet, and is drilling below 900 feet.

Collier County: Humble's Gulf Coast Realty Company 6, Sunniland field, C SW NE 19-48s-30e, is drilling below 10,924 feet in gray lime and anhydrite. A section at 9807-59 feet was acidized in an effort to exploit shows, but nothing of further encouragement was indicated.

Gilchrist County: Sun Oil Company's Alto Adams 1, SW SW 15-9s-15e, wildcat, is drilling below 2917 feet with no shows reported.

Hernando County: The Ohio Oil Company's Hernasco Corporation 1, 19-23s-18e, is drilling below 5165 feet with no shows.

Hillsboro County: Humble's T. S. Jameson 1, C NE NE 7-31s-22e, is drilling below 3761 feet in lime with no shows.

Alabama

J. H. Deason's DeBardelaban 1, C SE NW 6-14s-5w, Walker County wildcat, is reported to have encountered slight shows of oil in the 1900-foot zone. The well is bottomed at 1936 feet while samples of strata are being tested to see if further tests are warranted.

Pike County: Aubrey F. Pointer's W. F. Spencer 1, NE NW 28-8n-20e, has located a test 4 miles east and 10 miles south of Troy. It is understood that The Texas Company is contributing to the project, which is contracted to 6000 feet.

☆ Rocky Mountain Area

Texas Hikes Rangely Field Production With Two Wells

Texas Company pressing California Company for Rangely field, Colorado, leadership; Schwartz failure breaks long winning streak at Cat Creek; Transcal pushes development of North Baxter Basin, Wyoming.

Colorado

The Texas Company, completing its Carney 2-34 and U. P. 7-29 tests as flowing wells, each good for better than 1000 barrels a day, featured the week's news at Rangely Field and moved closer to equaling the production potential of The California Company, biggest producer in the field. The latter still has a comfortable margin, with approximately 30,000 barrels a day available from wells already completed and 12 more wells now drilling toward the highly productive Weber sandstone. Texas has 10 drilling. Stanolind Oil & Gas Company is drilling 5 Weber wells and Phillips Petroleum Company has 4 under way.

Wyoming

With successful completion of its second well in North Baxter Basin, Sweetwater County, Transcal Petroleum Corporation has moved into a rapid development program. The third well location will be announced shortly, according to Transcal officials. The discovery in the Tensleep last autumn was consedered

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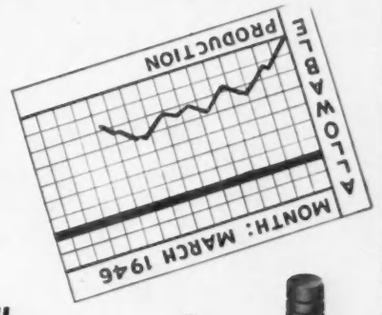

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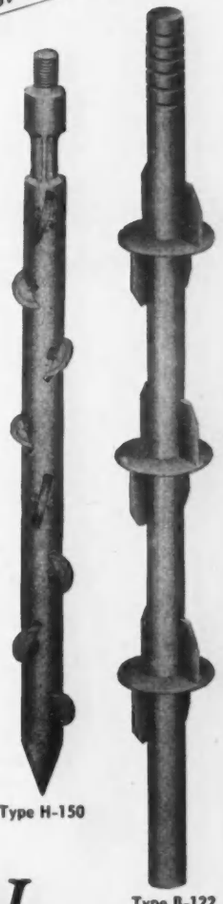

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With the exception of North Baxter Basin, greatest interest in the southern and southwestern Wyoming area now is in Mountain Fuel Supply Company's Church Butte deep test, which recently became the deepest well ever drilled in the Rocky Mountain region with drilling continuing below 12,800 feet.

Montana

H. H. Schwartz, Jr.'s Lucky Strike 1 has water input and has been abandoned. Schwartz is credited with the location of Dave Schrock's string of flowing wells on the Mosby Dome wing of the Cat Creek field, and with the more recent discovery at Rattlesnake Butte, 15 miles south of Cat Creek.

☆ California

Strike Northwest of Cymric Field Flows 1500 Barrels

New discovery northwest of Cymric in Kern County flows 1500 barrels; big well completed by Navy in Elk Hills has 400 feet of permeable Stevens sand; deep test to be drilled in Buttonwillow field; Mount Poso wildcat to test the Schist; Union Oil Company deepening Santa Fe Springs well; 2 Ventura County wildcats abandoned.

Kern County: Independent Exploration Company has a new oil discovery in the Temblor or Sheep Springs area northwest of the Cymric field. This company discovered the Oceanic sand in the Cymric field last year.

The discovery, Temblor 2 in 17-29s-21e, was completed in the Carneros flowing 1500 barrels of 17-gravity oil, 20 percent cut, through 1-inch choke. Total depth is 2828 feet with top of the Carneros placed at 2790 feet. Currently, the well is flowing through 17/64-inch choke at the rate of 304 barrels of 18-gravity oil, 4 percent cut. Tubing pressure is 275 pounds and casing pressure 375 pounds.

Standard Oil Company of California, operator for the Navy in the Elk Hills Reserve, has completed an outstanding well at the east end of the field. Well 337-34S in 34-30s-24e flowed more than 1000 barrels through a ¾-inch choke. Tubing pressure was 500 pounds. The well has 400 feet of permeable Stevens sand. According to field reports the well flowed over 3000 barrels on a short test. Total depth is 7216 feet, redrilled to 7080 feet.

Seaboard Oil Company will deepen Arlington 12-6 in the Buttonwillow gas field. The well, which is bottomed at 3224 feet, was drilled by Milham Exploration Company in 1935 and flowed 10 million cubic feet of gas on completion. Seaboard will explore to around 5300 feet.

Seaboard, operating for itself and 3 other companies, is drilling its Buena Vista Lake deep test, BVA 73-14 in 14-32-25, below 11,450 feet in hard shale, still above the main Stevens zone objective. Fish, dropped in the hole last week, was recovered in a few days.

Tide Water Associated Oil Company will drill a wildcat in the Telephone Hill area in 32-30-22. Well will be drilled on the McKittrick-Midway Oil Company's property and not far from a well drilled to 7362 feet and abandoned by The Ohio Oil Co. in 1930.

U. S. Drilling Company's wildcat in the Mount Poso area, Bohen 1, which found no showings of importance in the Vedder and Walker zones, will be carried down a short way into the basement before abandoning. Present bottom is in the Walker zone at 1620 feet.

Los Angeles County: Union Oil Company is deepening Alexander 25 in the Santa Fe Springs field from old depth of 3740 feet. Well is drilling below 5000 feet. The Ohio Oil Company was drilling and spot coring in its Gardena wildcat, Gardena Community Four 1 in 23-3s-14w. Depth is 9625 feet.

In the new East Los Angeles field, Chanslor-Canfield Midway Oil Company's outpost, Bandini 1 in 21-2s-12w, was held up at 9850 feet while crew fishes for a reamer blade.

Sandburg Petroleum Company of Ogden, Utah, headed by Stuart Boggs, has purchased the controlling interest in the Los Angeles Basin Petroleum Company. Company has 8 producing wells and 2 drill sites in the Wilmington field.

Mid-Continent API

Assisting Harold S. Kelly, Phillips Petroleum Company, Bartlesville, Okla., chairman of the program committee for the Mid-Continent District Spring meeting API division of production, are C. N. Copeland, Williams-Copeland Drilling Company, and W. L. Horner, Barnsdall Oil Company, both of Tulsa.

The meeting is scheduled June 6-7 at the Skirvin Hotel, Oklahoma City, and reservations should be made direct, J. S. Montgomery, district chairman, has advised.

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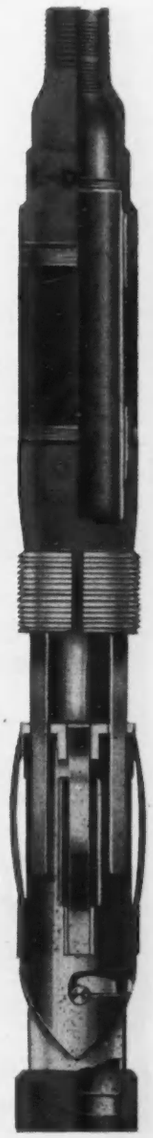
The Super HOOKWALL PACKER is specially designed and heavily constructed for use under the most severe working conditions. This enables it to meet conditions peculiar to many wells such as those which require resetting the Packer several times. Note the many "plus" features of the Super HOOKWALL PACKER:



1 Slip mechanism employs no dovetail — avoiding possible sticking due to corrosion or clogging. Designed so that it *cannot* fail to release.

2 Interchangeably adaptable to different sizes of tubing.

3 Has carburized slips for long, trouble-free life.

4 "Exlite," non-ferrous finish on cone and slip mechanism assures permanent resistance to rust and corrosion.

5 High Pressure NEOPRENE Packing Element bonded at each end to threaded metal parts making it easily replaceable in the field. NEOPRENE is highly resistant to any destructive action of petroleum crudes, emulsions and to corrosion. To avoid packer trouble, specify EXNER-DODGE PACKERS.

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FOURTH AND SANTA FE — TELEPHONE 313

COFFEYVILLE, KANSAS

☆Illinois Basin

Jefferson County, Illinois, Discovery Pumps 608 Barrels

Jefferson County, Illinois, discovery pumps 608 barrels; Clay County prospect abandoned after prolonged testing.

Illinois

Gulf Refining Company's Knox 1, NE NE SE 4-3s-4e, Jefferson County discovery well north of Belle Rive and ½ mile northeast of production in the Markham City pool, pumped 608 barrels of oil in 24 hours from Aux Vases sand at 2900-25 feet. Meanwhile, operator was drilling plug at Stone 1, NE NE 4-3s-4e, an offset 4 locations north of the discovery.

White County: Sun Oil Company and Phillips Petroleum Company's Okerson 1, NW SW NE 8-7s-8e, a mile northwest of the Roland pool, pumped 52 barrels of oil in 24 hours from McClosky lime at 3100-05 feet. The well flowed after 3000 gallons of acid and then went dead.

The Pure Oil Company was testing Munsey 1, NE SE NW 8-6s-9e, where a Cypress sand break at 2744-52 feet made 1100 feet of oil after pay was perforated.

McLean County: Minnesota Production Company's McGowan 1, NW SW NW 33-24n-5e, probably the northernmost well in Illinois and a rank wildcat test near Bloomington, is drilling below 3060 feet.

Clay County: Deep Rock Oil Company's Emory 1, SE SW 4-2n-6e, a semi-wildcat southwest of Flora, has been abandoned after several weeks of testing in the McClosky lime, which was treated with acid.

Shelby County: N. V. Duncan has set surface casing at Schumacher 1, NE NE NW 12-10n-6e, a new wildcat test.

Coles County: National Consumers' Arthur 9, wildcat test in Devonian lime at the northwest edge of the Mattoon pool, is making more than 1 million cubic feet of gas daily and some oil after acid in perforations at bottom of hole. Operators are preparing to perforate and acidize higher in the hole, which has been tight on information. The well is 1¼ miles northwest of the same operator's Herkimer 3, a Devonian discovery, which is still testing and showed for more than 5 million cubic feet of gas daily along with a small amount of oil. It was understood that a gas company is interested in development of the area for gas.

Sinclair Asking Bids On Two Products Lines

Sinclair Refining Company has requested bids for a project which entails construction of 170 miles of 6-inch products line. Terminal sites have been purchased, as has complete right-of-way for the line, and materials have already been contracted for with delivery to commence in April.

The new line is actually two lines, both originating in Toledo, Ohio, one extending to Columbus Ohio, and the other to Detroit. The line is an extension of the company's products system now operating from its East Chicago refinery, and with installation of a two-way pumping station at Toledo will have a capacity of approximately 15,000 barrels of gasoline daily.

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☆Michigan

Dundee Pay Being Tested By Saginaw County Wildcat

Rowmor Corporation's Bork 1, NW SE NW 3-11n-2e, Saginaw County, 12 miles southeast of Porter field is testing Dundee lime pay below 3060 feet. The wildcat showed 1100 feet of fluid after standing 24 hours, estimated 10 percent water. Bad roads prevented immediate setting of casing to continue production tests.

Arenac County: Welsh Oil Company's Robinson 1, NW NW SW 24-19n-4e, ¼ mile southeast of Deep River field production drilled Dundee dolomite dry at 2785 feet, which may mark the end of the productive area on the southeast.

☆Canada

Six Alberta Wells Staked As Weather Conditions Ease

Reflecting the easing of weather conditions, 6 new well-sites were recorded for the week in Alberta. Three are wildcats on the South Alberta Plains; 2 are seeking gas field extensions on the Central Plains; and 1 is a field well in the Turner Valley oil field in the Foothills.

British American Oil Company and Standard Oil Company of California have joined forces to test a seismograph-indicated Devonian dome near Wardlow, on the South Plains 12 miles north of Standard's Princess field, first and only Devonian oil field found in Alberta. The well, B. A.-Cal-Wardlow-Province 78-23-22-12, is in lsd 13 23-22-12w4. Likely completion depth will be around 4200 feet. The 2 concerns jointly hold leases totalling 27,000 acres and a reservation totalling 199,000 acres in the area.

McColl-Frontenac Oil Company and Union Oil Company of California have started the first of 4 joint ventures on 226,000 acres of lease and reservation extending north from the Montana Boundary 30 miles, on the Southeast Alberta Plains. Initial well, McColl-Frontenac-Union Oil 11B-6-2-8, is in lsd 11 6-2-8w4, 6½ miles north of the border. The well is an Ellis sand-Madison lime test, down the north plunge of the Pinhorn structure established as gas-bearing in 1944. It is 5½ miles north and west of McColl-Frontenac No. 6-8-1-8 gas discovery and 4½ miles northwest of the McColl-Frontenac 9-17-1-8.

Standard has started an Ellis sand wildcat in the Irvine Area, on the Southeast Alberta Plains. The well, Irvine-Province No. 28-32-11-2, is in lsd 16 32-11-2w4, on the southerly part of reservations totalling 230,000 acres worked over by Standard since August, 1945.

Northwestern Utilities Ltd., operator of the Viking and Kinsella gas fields on the Central Alberta Plains and supplier of gas to the Edmonton city system, has started a 6-well program to determine possibilities of the 8 mile stretch, separating the two gas fields. Initial wells in this program, Kinsella 18 in lsd 10 20-48-11w4 and Kinsella 19 in lsd 6 32-48-11w4, are respectively 2 and 4 miles north of the Kinsella producing area.

CALIFORNIA WILDCATS

Kern County — Failures: J. Paul Getty's J.A.C. 8-8, 8-30s-29e, South Portals area, Tsm Transition 3518 ft, Pulv 4340, Nozu 5310, Jewett 6520, abnd 6560.

Miller and York's K.C.L. 2, 13-28s-28e, Round Mountain area, Pyramid Hills 2210 ft, Vedder 2309, abnd 2348.

Los Angeles County—Failure: Wilshire Oil Co.'s Marquis 1, 35-3n-16w, Alliso Canyon area, abnd 9442.

Ventura County—Failure: Union Oil's Moran 1, 1-4n-19w, Hopper Creek area, abnd 7663.

ILLINOIS WILDCATS

Coles County — Failure: Walter Duncan's Cobb 1-A, ne sw se 10-13n-7e, abnd 1958.

Effingham County—Failure: Keating Drlg. Co.'s Roether 1, sw ne ne 23-9n-6e, abnd 2511.

Hamilton County — Failure: Dale Hopkins' Johnson 1, ne sw ne 24-6s-7e, abnd 3388.

Wayne County—Failure: C. P. Chandler's McLin 1, se ne sw 32-1s-8e, abnd 3427.

INDIANA WILDCATS

Daviess County—Failure: R. D. Brown, Inc's McCracken 1, c s½ sw ne 16-2n-6w, abnd 2210.

Gibson County—Failure: Olds Oil Co. et al's Warnock 1, se ne se 6-2s-10w, abnd 1050.

KANSAS WILDCATS

Morris County—Failures: Skelly's Stroda 1, ne ne se 5-16s-5e, base KC 2015, abnd 2264.

Nadel & Gussman's Novak 1, nw nw nw 30-17s-5e, abnd 2375.

Norton County — Failure: Helmerich & Payne's Kitzke 1, se se se 16-5s-21w, base KC 3603 ft, abnd 3711.

Phillips County—Oil Discovery: Helmerich & Payne & Tide Water's Bowman 1, nw nw se 3-5s-20w, Arbuckle 3373 ft, pumped 201 bbls day, Lansing 3149-56 ft, td 3554.

Stafford County — Failure: R. H. Shield's Sheppard 1, c w½ sw se 16-22s-11w, Arb 3591 ft, abnd 3607.

Sumner County — Failure: E. S. Adkins' Totten 1, sw sw sw 10-33s-2e, Arb 3471 ft, abnd 3495.

NORTH LOUISIANA WILDCATS

Bossier Parish—Failure: H. C. Owens' Skidmore 1, c ne se 1-16n-11w, Massive anhy 4080, James 4836, Pettit porosity 5323, abnd 5365.

Richland Parish—Failures: J. A. Humphrey-Toddie L. Wynne's M. D. Boughton 1, 36-16n-6e, gas rock 2464, Tuscaloosa 2470, 1st Glenrose 3180, anhy 3652, abnd 3655.

Big Chief Drlg. Co.'s Geo. B. Franklin 1, sw se 7-17n-9e, Sparta 683, Cane River 1350, Wilcox 1675, Midway 2569, gas rock 3035, Glenrose 3035, massive anhy 3216, James li 4044, Sligo 4302, Pettit porosity 4368, Travis Peak 4500, abnd 4818.

SOUTH LOUISIANA WILDCAT

St. Mary Parish—Failure: Humble's J. M. Burguires Co. et al 1, Cote Blanche Island area, 22-15s-7e, abnd 7809.

MICHIGAN WILDCATS

Kalamazoo County—Failure: W. D. Gannet's Deal 1, sw sw sw 29-1s-12w, abnd 1310.

Newaygo County—Failure: Daily Crude's Ridderman 1 ne ne se 18-13n-13w, Dundee 2855 ft, abnd 3048.

Saginaw County — Failure: Cities Service's McNier 1, se se se 11-12n-1e, abnd 3422.

MISSISSIPPI WILDCATS

Warren County—Gas Discovery: Magnolia's Ruth B. Pidgeon 1, 27-17n-4e, perf gas sand 2036-42 ft & 2042-48 ft, ip flwd 7,200,000 cf gas per day.

Lincoln County — Failure: Danciger Oil & Refining Co.'s Central Lbr. Co. 1, c se sw 22-8n-5e, Wilcox 3950 ft, Tuscaloosa 9568, Massive sd 10,212, abnd 10,664.

MONTANA WILDCAT

Petroleum County—Oil Discovery: Schrock, Schwartz & McKenna's Gov't. 1, Sect 22-13n-28e, Rattlesnake Butte, td 3235, flowing 5 b/d, 32 gravity oil Second Cat Creek sand-topped 2780.

OKLAHOMA WILDCATS

Logan County—Gas Discovery: J. E. Trigg's LaGrande 1, ne ne sw 26-15n-1w, flow 1½ million cf gas, Bartlesville 5207-19 ft, td 6364.

Lincoln County—Failure: Crawford & Blakenship's Murphy 1, sw se ne 24-15n-5e, Ver 3372 ft, abnd 3475.

Oklahoma County — Failure: Peppers Refg. Co.'s Moyer 1, nw nw ne 3-14n-2w, abnd 6387.

Stephens County—Failure: Lundy & Shears' Massie 1, ne ne nw 31-1s-5w, abnd 3502.

WEST TEXAS WILDCATS

Crane County — Failure: Sid Richardson's Dawson 1 s w¼ of w¼ sect 2. A. L. Brigance sur, elev 2412 ft, Yates 1230, San Andres 2360 to 3050, San Angelo (Holt) 3120, Clear Fork 3350, Tubb 3760 to 3815, base Permian 5580, Devonian chert 5670, Silurian 6600, Montoya 6710, McKee 7124, 1st Ellenburger 7232, 2nd Simpson 7530, abnd 8170.

Crockett County—Failure: T. W. & J. M. Loffland Jr. et al's Cox 1, 330 ft snl and 660 ft ewl se¼ I&GN Ry. 21, blk 2, elev 2115 ft, abnd 969.

Lubbock County—Failure: R. F. Windfohr-Milhoan Production Co.'s Kreuger 1, c nw nw HE&WT Ry. 30, blk 20, elev 3248 ft, brown lime 3740, San Andres 3750, Glorietta 5390, Clear Fork 5525, abnd 6525.

Pecos County—Failures: Bryce McCandless et el's Atlantic-Cordova 1-111, c se nw H&GN Ry. 111, blk 11, elev 2398 ft, Ellenburger 4175, abnd 4522.

Phillips Pet. Co.'s Elsinore Cattle Co. 1, 2095 ft ewl and 435 ft nsl GC&SF Ry. 53, blk D, elev 4105 ft, jkd abnd 12,096.

Reeves County — Failure: Continental Oil Co.'s Collier 1, c sw nw H&TC Ry. 180, blk 1, elev 2884 ft, anhydrite 1160, Delaware lime 5253, Delaware sand 5266, abnd 5377.

WEST TEXAS OUTPOST

Hockley County—Levelland Field Extension: Stanolind's Mike Veretto 1, 440 ft out of nwc Labor 7, League 72, Val Varde CSL sur, 2¾ mi se of the discovery, nearest producer, elev 3562 ft, brown lime 3450, San Andres 3770, flowed 343 bbls 30.6-gr plus 30 bbls water thru 1½-in acidized 8500 gals San Andres 4760-4853 ft, td 4889, pb to 4853.

WEST TEXAS NEW PAY DISCOVERIES

Andrews County—Martin Field Deep Pay Discovery: Humble's Parker 2, c nw nw PSL 23, blk A-41, se offset to Basal Clear Fork production, elev 3310 ft, San Andres 4180, San Angelo 5300, Tubb 6220, Permian-Pennsylvanian contact 7945, Simpson 8155, Ellenburger 8836, flow 1594 bbls 42.3-gr, gas-oil ratio 128/1 on ½-in natural thru Ellenburger perf 8850-65 ft, td 8880.

Winkler County—Emperor-Holt Field Deep Pay Discovery: Texas Pacific Coal & Oil Co.'s Brown-Altman 1, lse 4, offsetting 2350-ft gasser, elev 2807 ft, salt 1150-2180, brown lime 2190, Yates sand 2320, Yates (frosted) 2350, Glorietta 4750, flowed 265 bbls 40.1-gr, gor 800/1, through 5/64-in, used 500 gals mud acid and 1500 gals regular acid via Holt perf 4765-4810 ft, td 6255.

WEST CENTRAL TEXAS WILDCATS

Callahan County — Failures: Anzac Oil Corp.'s Heyser 1, 1020 ft nsl and 4040 ft wel R. Green sur 220, elev 1740 ft, abnd 732.

Norman D. Fitzgerald et al's Kennard 1, ne sw sw S.P. Ry. 8, A-1641, elev 2021 ft, abnd 1957.

Coleman County—Failure: Elgean Shield et al's Johnson 1, 2053 ft snl and 330 wel of west 120 ac of sect 21, Phil Zoeller sur, elev 1745 ft, Bend 2218, abnd 3000.

Concho County—Failure: Eltex, Ltd.'s Roberts 1, 304 ft snl and 264 ft wel T&NO Ry. 147, blk 72, A-901, elev 1972 ft, abnd 4063.

Shackelford County—Oil Discoveries: Hedrick Oil Co.-Jones & Stasney's Dawson & Conway 1, nw ne nw E.T. Ry. 195, elev 1636 ft, Saddle Creek lime 1525, pump 21 bbls 36.6-gr, plus 50 percent water, lime 1561-68 ft.

Phillips Pet. Co.'s Ace Hickman-Pan 1, 944 ft nsl and 1665 ft wel ne¼ sect 16, Lunatic Asylum Lands, 1½ mi w Sedwick, elev 1355 ft, Ellenburger 4210, flow 1420 bbls 44.8-gr, gas-oil ratio 422/1, via 3/16-in, acidized 500 gals Ellenburger 4210-20.

Shackelford County—Failures: Eltex, Ltd.'s Merrick Davis 1-B, nw nw se T&P Ry. 16, blk 12, elev 1916 ft, Bend 4592, Ellenburger 5153, abnd 5315.

Mass-Tex O&G Co.-Homer W. Snowden's Brazzel 1, 330 ft out nwc e½ TE&L Co. 1554, elev 1251 ft, Bend 3657, Mississippi 4382, Ellenburger 4465, abnd 4517.

T. P. Coal & Oil Co.'s Snyder 1, ne ne ne sect 36, Lunatic Asylum Lands, elev 1406 ft, Bend 3441, Ellenburger 4166, 1st water 4182, abnd 4186.

WEST CENTRAL NEW PAY DISCOVERY

Jones County—Cooper Field New Oil Pay: S. B. Roberts et al's Cooper 6, ne ne sw T&P Ry. 29, blk 15, elev 1700 ft, flowed 237 bbls 37-gr, gas-oil ratio 250/1, via ¼-in, acidized 1000 gals Gunsight perf 2317-30 ft, td 2342.

WEST CENTRAL TEXAS OUTPOST

Fisher County — McCaulley Field Outpost Failure: Frank Buttram et al's Mason 1, 1980 ft wel and 990 ft snl sect 2, Sally English sur, 1¼ mi e by s of production, elev 1866 ft, Flippen lime 3135, abnd 3300.

NORTH TEXAS WILDCATS

Archer County—Failures: Bridwell Oil Co.'s L. F. Wilson 2-J, 1500 ft ewl and 1320 nsl S.P. Ry. 1, A-412, abnd 1670.

E. B. Clark et al's McGregor Est. 1, 467 ft out nec w½ se sect 7, H. H. Duff sur A-732, elev 989 ft, Vogtsberger lime 4740, Bend 5255, Barnett 5470, Ellenburger 5638, abnd 5703.

Fain-McGaha & Kadane's Jones-Cullum 1, sw sw ne S.P. Ry. 2, A-1255, elev 1047 ft, abnd 4400.

D. H. Bolin et al's Purcell 3, 1950 ft ewl and 1310 ft nsl blk 80, Jefferson CSL, abnd 1119.

D. H. Bolin et al's Purcell 4, 150 ft ewl and 600 ft nsl blk 80, Jefferson CSL, abnd 1184.

Sallie F. Hutcheson's Harris 1, 1050 ft out SWc blk 60, J. W. Harris sur, abnd 1404.

Sallie F. Hutcheson's Hutcheson 2, 1626 ft

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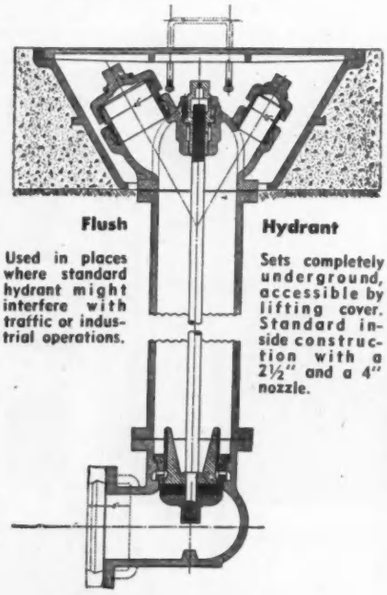

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snl and 1448 ft wel blk 142, J. W. Harris sur, abnd 2251.

Trumter Pet. Corp.'s Thomas 1, 549 ft from e and w and 1500 ft nsl blk 2, n½ N. Thomas sur A-454, abnd 1434.

Cooke County—Failures: J. W. Baldwin et et al's Stanley 1, 330 ft snl and 960 ft ewl of 152-ac tr, John DeMarcus sur A-314, abnd 2722.

Leland Fikes et al's Morrow 1, 330 ft from m/w/e and 420 ft nsl of blk 5, Cooke CSL sur, Ellenburger 1747, abnd 1800.

J. W. Hastings et al's Atcheson 1, 330 ft nsl and 1800 ft ewl of T. Polk sur A-876, Ellenburger 2860, abnd 2925.

Jack County—Failures: Hanlon & Buchanan's Briley 1-A, 1167 ft out nwc B. C. Finley sur A-222, abnd 577.

Hanlon & Buchanan's Knox 1, 539 ft snl and 1167 ft wel se¼ S.P. Ry. 1, A-578, abnd 600.

Montague County—Failure: Bridwell Oil Co.-Bruce Sullivan's McCall & Fooshee 1, 916 from se and 711 from sw lines I. E. M. Williams sur A-882, elev 1046 ft, Bend 6104, abnd 6555.

Wichita County — Failure: Benson Bros.' Foster 1, 1520 ft snl and 2840 wel SA&MG sect 1, A-272, abnd 2053.

Wilbarger County—Oil Discovery: Paradise Oil Co. (was W. T. Waggoner Est.'s) Waggoner 1-G, c e½ se se H&TC Ry. 39, blk 2, elev 1231 ft, Bend 4084, Ellenburger 4442, flow 475 bbls 40-gr, gas-oil ratio 600/1 via ⅝-in, acidized 1000 gals Ellenburger perf 4502-16 ft, td 4652.

Wilbarger County—Failure: Frank Wood's Koehn-Sutton 1, 2420 ft snl and 1540 ft ewl H&TC Ry. 24, blk 13, abnd 2221.

Young County—Failures: Davis Investment Co.'s Morris 2, 1080 ft out swc TE&L Co. sect 254, abnd 700.

F. B. Paine Dr. Co.'s Huffman-Shell 1, 1750 ft nsl and 450 ft ewl of TE&L Co. sect 1442, abnd 618.

Knox County—Failure: L. S. Youngblood & R. L. Foree's Cartwright 1, 2640 ft ewl and 30 ft nsl H&TC Ry. 70, blk 45, elev 1432 ft, abnd 1844.

Montague County — Failure: Continental's Harvey 1, 1400 ft nsl and 1400 wel TE&L Co. 2880, elev 1075 ft, Bend 6015, Marble Falls 6155, Barnett 6506, Viola 6778, Ellenburger 7029, abnd 7075.

Throckmorton County—Failures: S. D. Johnson & Russell Maguire's Buchanan 1, 150 ft out SEc sec 927, TE&L Co. sur, abnd 1503.

E. W. Whitney et al's Turner 1, 330 ft out SEc sec 982, TE&L Co. sur, elev 1225 ft, Palo Pinto 2085 ft, abnd 2300.

EAST TEXAS WILDCATS

Rusk County—Failure: John R. Bunn et al's Weatherby-Magnolia 1, 5300 ft wel and 6300 nsl of Wade H. Walters sur, elev 287 ft, Pecan 2895, Saratoga 2522, Austin 3705-3889, Woodbine 3889, abnd 3976.

Smith County—Failure: Chapel Hill Gas System's Mayfield-Shell 1, 900 ft ewl and 850 ft snl of 135-ac tract and Jesse Dunlap sur, elev 476 ft, top Austin 3830-60, base Austin 4010-40 top Woodbine 4100-30, Georgetown 4530-45, Goodland 5620, massive anhydrite 7342-57, base massive 7592-7602, abnd 8539.

Wood County—Failure: Delta Dr. Co. et al's White 1, 330 ft nsl and 2800 ft from m/s/w line of J. Stark sur A-537, elev 445 ft, Navarro 1965-80 ft, Pecan 2825-40, Austin 4355-4485, Sub-Clarksville 4532, Woodbine 4970-80, red beds 5010-20, abnd 5506.

EAST TEXAS BORDER COUNTIES WILDCAT

Panola County—Failure: Ohio Oil Co.'s J. O. Britton 1, Wm. Taylor sur, abnd 7001.

SOUTH CENTRAL TEXAS WILDCATS

Bexar County—Failure: Ernest J. Biskamp's State of Tex. 1, 330 fr sl 1530 fr sly/el 280-ac San Antonio State Hospital ld, upper Taylor 900, abnd in lower Taylor 1507.

Travis County—Failure: S. M. Messer & W. J. Riley's A. Garcie 1, 660 fr nwl 943 fr nel 169-ac tr, Jose A. Navarro Gr, Austin chalk 1010, abnd 1310.

SOUTHWEST TEXAS WILDCATS

Duval County — Failure: Cox & Hamon's Albert Martin 1, 347 fr nwl 313 fr nel lot 208, Angeles de Ariba Gr, abnd 2833.

Starr County—Failure: F. W. Dooley, Tr.'s L. Canales 1, 1200 fr swl midway between nw&nel tr 5, 262.18-ac lse, La Sacatosa Gr, abnd 1436.

Webb County — Failure: Blanco Oil Co.'s McLean 1, 589 fr wl 1071 fr sl blk 17, Henry James sbdn, Albercas Gr, 960-ac, w½ blk 17, N. Albercas area, abnd 2627.

UPPER TEXAS COAST WILDCATS

Brazoria County—Failure: General Crude's B. H. Wisdom 6, 100 nw 40 sw c blk 109, 840-ac tr, A. Darst sur, abnd 6314.

Harris County—Failure: Jack W. Frazier's Hall's Bayou Realty Corp et al 1, 400 fr wl lot 13, blk 2, 20.5-ac lse, Woodland acres sbdn, J. Callihan sur, abnd 4630.

Liberty County—McCoy Distillate Discovery: Ohio Oil Co.'s Kirby Lbr. Co. 1, 660 fr s&el 348 fr nl tr 5, 61-ac lse, James McCoy Lge, pay 9107, perf 9106-27, flow 51.83 bbls 54.1-gr dist, 1,167,000 gas, ⅝-in, tp 290 lbs, cp 3210 lbs, 18% sw, td 10,285.

Trinity County—Distillate Discovery: Magnolia's Bolton 1, s sw Navarro Bolton 1, 5000-ac lse, Henry Bond Lge, c lot 80, Edwards li pay 10,500, perf 240 shots 10,500-540, flow 24 bbls 51-gr cond, 500,000 gas, 10/64-in, tp 4229 lbs, td 12,505.

Tyler County—Failure: Erwin Millner's S. H. Reid 1, 700 fr el 500 fr wl 160-ac tr, E. Sanderson sur, abnd 7630.

Ft. Bend County—Failure: Stewart et al's A. P. George 1 4498 fr sel 3210 fr swl 2046-ac tr and A. D. Keller sur, abnd 8303.

LOWER TEXAS COAST WILDCATS

Bee County—Distillate Discovery: Mills Bennett's Martha Berger et al 1, 660 fr el 660 fr swl at ra w½ sect 19, 152.6-ac lse, J. M. Uranga Gr, Ragley sbdn, sect 19, Luling pay 8082, perf 464 8082-8140, flow 192 bbls dist, 6 mln gas, ¼-in, tp 3800 lbs, cp 4000 lbs, td 8890.

Lavaca County — Condensate Discovery: Sterling O&R Corp.'s R. H. Goodrich B-1, 2517.36 fr nw&sel 660 fr nel German Immigration Co. sur, 640-ac lse, perf 10,914-42 and 10,880-914, flow 800,000 gas, 12½ bbls 50.4-gr dist, td 11,014.

Live Oak County—Failures: Bridewell Oil Co.'s R. W. Duncan 1, 467 fr nw&nel 826.6-ac lse Live Oak Co. Sch. Ld. sur, 6 mi se Mt. Lucas fld, abnd 4616.

H. E. Dirks et al's Mrs. E. T. Turner 1, 467 s se at ra fr nwly/l 103.7-ac lse, B. B. Atkins sur, abnd 4256.

LOWER TEXAS COAST NEW PAY TESTS

Karnes County—Falls City Discovery: Southern Minerals Corp.'s L. A. Faires 4, 467 fr nwl 2375 fr nel 255.24-ac lse, Louis Manchaca Gr, 956 sw Faires 3, pay 4887, perf 60 shots 4887-4895, flow 20.25 bbls 48.2-gr, 9/64-in, tp 25 lbs, td 5002.

Victoria County — Heyser Discovery: Magnolia's O. M. Lander 1, 277 fr sel 39.43-ac lse, J. E. Galban sur, otd 5750, pay 7119, perf 41 shots 7119-23, flow 47.63 bbls 46-gr oil, 69.47% wtr, 7/64-in, gor 5039/1, tp 1350 lbs, cp 2500 lbs, td 7444.

WILDCAT STARTS

ALABAMA

Pike County: A. M. Poynter's W. K. Spencer 1, ne nw 26-8n-20e, lcn.

ARIZONA

Greenlee County: Roy Durham and Don Leidecker's Lewis Dean 1, c nw ne 8-8s-32e, pre-Cambrian test, or 3000 feet, set surface pipe.

Pima County: Eloy Oil Development's State 1, nw nw 8-12s-11e, drlg.

ARKANSAS

Prairie County: M. W. Martin et al's W. H. Stewart 1, 3-3n-5w, reported abnd, still drlg 2655 ft.

CALIFORNIA

Kern County: L. S. Gilmour's Long 1, 6-30s-29e, Portals area, lcn.

Jergins Oil Co.'s Dyer Creek 48, 9-26s-27e, Dyer Creek area, foundation.

Wilshire Oil Co.'s Lehman 2, 18-28s-20e, Belridge area, drlg.

Wilshire Oil Co.'s McKittrick 1, 12-30s-21e, McKittrick area, rig up.

Glenn County: Standard Oil Co.'s Donohoe Fee 1, 6-20s-1e, Willows area, lcn.

Kings County: Harp and Brown, Operators' Corcoran Irrigation District 1, 21-20s-22e, Corcoran area, drlg.

Tulare County: G. B. Finch Oil Co. Ltd.'s Finch 3, 36-23s-22e, Trico area, prep to spud.

G. B. Finch Oil Co. Ltd.'s Finch 4, 31-23s-23e, Trico area, cellar.

Ventura County: R. E. Havenstrite, Operators' Lisk 1, 15-5n-18w, Piru area, lcn.

FLORIDA

Dixie County: Stanolind and Sun's Perpetual Forest Inc. 1, nw nw 5-11s-11e, lcn.

ILLINOIS

Clinton County: B. F. Thompson's Roper 1, se se sw 4-1n-1w, drlg.

Jefferson County: Texas' Burr Oak Coal 1, nw ne nw 8-4s-1e, lcn.

Marion County: J. T. Crowder's Hotka 1, nw sw nw 34-4n-2e, lcn.

INDIANA

Posey County: H. E. Ledbetter et al's Utley 1, se ne sw 30-5s-13w, lcn.

KANSAS

Butler County: J. P. Gaty's Coiner 1, nw nw sw 19-27s-3e, rur.

Harper County: Lion Oil's Reed 1, se nw nw 3-33s-8w, mim.

Sedgwick County: H. H. Brown et al's Brown 1, nw ne nw 12-29s-2e, drlg.

KENTUCKY

Butler County: McGinley Bros.' Whalen 1, se sw ne 12-H-36, drlg.

Crittenden County: Reed & Pfunder's Dean 1, sw ne nw 20-K-19, lcn.

Henderson County: Delta Dr. & Lacy's Boswell 1, sw ne sw 7-P-26, drlg.

Henderson County: Q. B. Mitchell's Thornsberry 1, sw se se 5-N-23, drlg.

Webster County: Reed & Pfunder's Lofton 1, nw nw ne 14-K-20, lcn.

NORTH LOUISIANA

Bossier Parish: Pyle & Lensgraph's Pirkle 1, 31-19n-12w, (OWDD), otd 1864, ru to deepen to 3500.

SOUTH LOUISIANA

Jefferson Parish: Calif. Co.'s E. P. Brady et al 2, begin at USCGS Station "Lafitte 1934" then n 50° 43 mins 40 secs e 25,683 to lcn in 24-16s-24e, 1 mi se Brady et al disc well 1, 10,000-ft test.

MICHIGAN

Iosco County: Matlock and Welch's Johnson 1, ne nw ne 1-22n-8e, drlg.

Midland County: Sun Oil's Walker 1, sw sw sw 11-16n-1w, rig.

MONTANA

Petroleum County: Ike Taylor's Fraser 1, se se ne 15-13n-27e, 6 mi west of Rattlesnake Butte discovery, 20 mi sw Cat Creek.

NEW MEXICO

San Miguel County: Florence Drilling Co. et al's Thompson 1, c se nw 14-12n-22e, cem cas, td 565.

OKLAHOMA

Caddo County: Superior's Willer 1, nw nw ne 11-8n-12w, mim.

Jefferson County: Bridwell Oil & Gas Co.'s Seay 1, nw ne se 16-6s-6w, drlg.

Kiowa County: Smith & DeBolt's Nickle 1, sw se nw 23-7n-18w, lcn.

Lincoln County: Wofford-Nicholson & Rose's Steger 1, se se se 3-15n-5e, rur.

Logan County: J. E. Trigg's Lambert 2, ne nw nw 26-15n-1w, drlg.

Frank Russell's Griffin 1, se se nw 33-15n-1w, br.

Okfuskee County: Fred C. Summers' Leonard Est. 1, nw nw nw 23-13n-7e, mir.

Pawnee County: J. R. Porter's Potter 1, sw sw sw 24-21n-6e, lcn.

Woods County: Champlin Refg.'s Scribner 1, se sw ne 14-28n-19w, lcn.

WEST TEXAS

Crockett County: J. T. Brewer and C. V. Nelms' L. B. Cox Jr. 1, 330 ft snl and 1650 ewl sect 11, J. H. Gibson sur, lcn 5600-ft cable test.

Ector County: Grisham-Hunter Corp.'s R. B. Cowden 1-D, c se se T&P Ry. 5, blk 45, T-2-N, lcn for 4500-ft San Andres test.

WEST CENTRAL TEXAS

Callahan County: Boyd Gillespie et al's Tom Windham 1, 220 ft wel and 440 ft nsl BBB&B Ry. 145, lcn cable test.

Shackelford County: John T. Cross et al's O. B. Cammel 1, 450 ft snl and 150 ft ewl of nw¼ sect 4, B.A.L. sur, lcn.

Carl Hovgard et al's A. A. Gustafson 1, se se nw BBB&C Ry. 169, lcn 4200-ft Ellenburger cable test.

R. S. Miesse et al's B. A. Elliott 1, 1110 ft snl and 1590 ft ewl nw¼ sect 46, Bayland Orphan Home sur, lcn 800-ft cable test.

Harold G. Neely & Lemon Neely's Joe Carlile 1, 330 ft out swc W. S. Pope sur 6, lcn 2800-ft cable test.

NORTH TEXAS

Archer County: D. H. Bolin et al's Purcell 4, 150 ft ewl and 600 ft nsl blk 80, Jefferson CSL sur, 1200-ft test, sp.

D. H. Bolin et al's Purcell 1-B, 1000 ft snl and 1320 ft wel blk 102, Jefferson CSL sur, lcn 1200-ft test.

Sallie Hutcheson et al's Hutcheson 2, 1626 ft snl and 1448 ft wel blk 142, J. W. Harris subdiv, sd 2251 ft.

C. W. & W. L. Snoddy's L. F. Wilson 1, sw sw ne sect 63, ATNCL sur, lcn 5300-ft Ellenburger test.

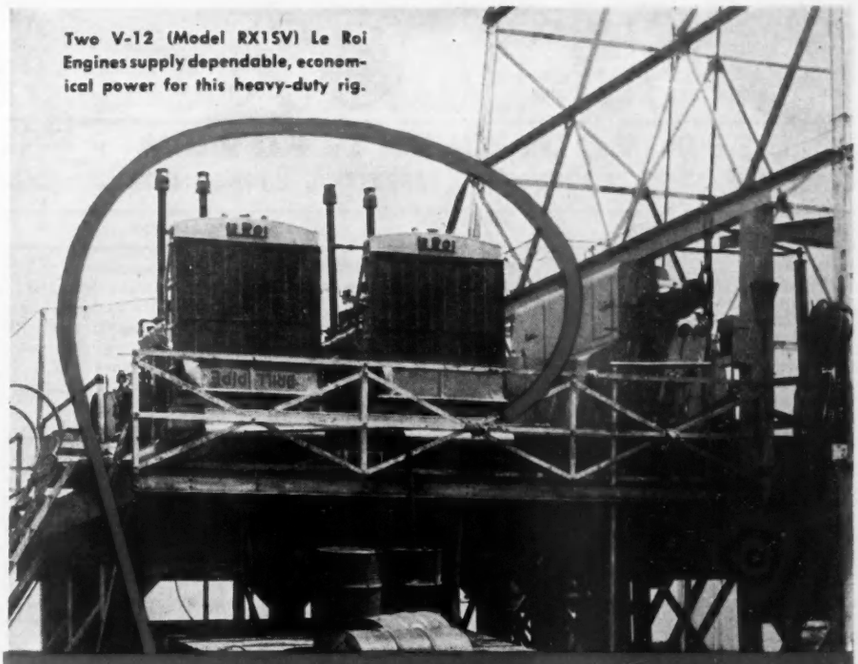
C. Y. Gorman-Hedrick & Johnson's Geo. Parrish 1, 450 ft out SWc lot 1, sec. 97, ATNCL sur lcn 1600-ft rotary test.

Bridwell's E. A. DeBus 2, 900 ft snl and 750 ft wel of w½ S.P.Ry. 2, A-1202, lcn 2000-ft rotary test.

Baylor County: White Eagle Oil Co.'s McDonald 1, se se nw T&NO Ry. 148, lcn 3000-ft Palo Pinto lime test.

Denton County: Leland Fikes et al's G. W. Phillips 1, 330 ft wel and 430 ft nsl sect 35, T&P Ry. sur A-1674, ¾ mi sw Aubrey, lcn 3500-ft rotary test.

Foard County: DeKalb Agri. Assn's R. L. Kincaid 1, 330 ft out nwc Isaac Aldridge sur,



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Great Bend

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1—Crown Block — Emsco—RB—36"—6 sheave—Type EA-57 c/w catline sheave 750.00
1—Swivel—Ideal—6"—Type AA..... 700.00
1—Rotary — Emsco — RB — 25½" — Type DA 1,000.00
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National Stock Yards, St. Clair County, Ill.

GEOLOGICAL MAP
covering the upper Gulf Coast of Texas, showing all new discoveries and all dry holes drilled to February 15, 1946. Dry holes show well-elev. and all collerated sand tops, oil fields, covered green, gas fields red, sulphur purple, geographical prospects yellow, completed fields brown.
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FOR SALE: 6000 acres of land including mineral rights at $8.00 per acre. Forty miles north Muscle Shoals. Will divide smaller tracts. Water and timber on land, Near Highway. Address: Box 6, c/o The Oil Weekly, Houston, Texas.

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2—100 KW KVA General Electric Generators with Exciter and panel switch boards.

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■ **FOR SALE: 100 HP Model WL Waukesha Engine, Completely overhauled, excellent condition—$800.00.**
Keith Railway Equipment Co., Box 348, Longview, Texas. Phone 2307.

HELP WANTED

■ **SEISMIC PARTY CHIEF wanted by well known established contracting company. Must be college graduate with at least five years experience in interpretation preferably Gulf Coast. Excellent salary and opportunity. Only highly experienced applicants will be considered. Write Box 1, The Oil Weekly, Houston, Texas.**

■ ACCOUNTANT SENIOR — Headquarters in Caracas, Venezuela. Knowledge of Spanish & previous exp. in crude producing accounting essential. Exp. in Spanish speaking countries preferred. Write full particulars, The Atlantic Refining Co., Rm. 900, Box 7258, Phila. 1, Pa.

NOTICES

OIL PRODUCTION

wanted. Property that will make from $20,000.00 to $200,000.00 PER MONTH.

W. K. MANN OSAGE HOTEL,
Arkansas City, Kansas

■ Any oil company knowing the existence of stock or shares owned by the late A. L. Taylor, please communicate with his daughter, Mrs. Mary Taylor Olivier, 925 Caffin Avenue, New Orleans 17, Louisiana.

■ WANTED: Operators to finance and further develop proven and semi-proven oil and gas properties in Montana.
Hamilton & Hamilton, Inc.
Box 1605, 535 Ford Bldg.
Great Falls, Montana.

LEASES, DRILLING ACREAGE ETC.

■ One twenty-fourth interest in test well and lease on west half of section 20 Twp 18 Range 7 w of Rice County, Kansas. **$1,000 each.** Section 19 has 8 wells over 2,000 Bbl. each.
C. W. Fleming, Box 217, Geneseo, Kansas.

■ **Test well is now being drilled on ideal structure believed to develop shallow limestone oil field, Pima County, Arizona. Leases on U. S. mineral reserve land in immediate vicinity of drilling well can now be secured at a very low price per acre, quarter, half or whole sections, if advantage is taken before oil or gas is developed on the structure. Without obligations write for particulars to the Lund Engineering Co., Petroleum Geologists, 2914 Potrero Rd., Phoenix, Arizona.**

SITUATION WANTED

■ Seismograph Computer available. Engineering background. Some interpretation and qualified drafting. Address: Box 9, c/o The Oil Weekly, Houston, Texas.

■ WANTED: Production job with progressive independent oil company. Six years experience with flowing, jetting and pumping wells with major oil companies. Prefer high climate. Four years college. Thoroughly experienced with production reports, gas/oil ratio test and high pressure. Address: Box 11, c/o The Oil Weekly, Houston, Texas.

■ Desire foreign employment as machine shop foreman or field service man. Served apprenticeship as railroad machinist; experience with pipeline and tool companies. Some knowledge of Spanish; good fishing tool man; age 38. Leaving soon for discharge. Robert D. Cain, C.M.M., USS Xanthus AR 19, FPO San Francisco, Calif.

Use the Trading Post for Equipment, Services and Personnel

5 mi se Crowell, lcn 6500-ft Ellenburger test.

Jack County: Hanlon & Buchanan's Mrs. M. E. Munson 1, 1167 ft from m/n/ne and 1167 ft from nw lines of T.C. Ry. 1, A-2046, lcn 1000-ft test.

Hanlon & Buchanan's Munson 2, 233 ft n and 233 ft w of swc of J. Harmon sur A-1843, but in T.C. Ry. 1, A-2046, lcn 1000-ft test.

Clay County: L. T. Burns et al's H. Sanzenbacher 2, 4000 ft out of NWc L. N. Sparks sur A-401, lcn 6500-ft Ellenburger test.

Cooke County: M. L. Barrett et al's Wm. Bergman 1, 330 ft out SWc blk 20, John Barnett sur A-42, lcn 1600-ft rotary test.

Knox County: L. S. Youngblood & R. L. Foree et al's Bates 1-A, 330 ft out SWc sec 1, D&W Ry. sur, blk 2, lcn 1900-ft Cisco sand test.

Montague County: Grady T. Chupp et al's A. Durham 1, 330 ft out SEc W. J. Wagnon sur A-936, lcn 4000-ft rotary test.

Wichita County: A. E. Blair et al's H. W. Rodgers 1, 1600 ft ewl and 841 ft nsl SA&MG sur A-275, lcn 2000-ft rotary test.

Akin-Dimock et al's J. H. McDonald 1, 1800 ft nsl and 150 ft ewl blk 305, Waggoner Colony Lands, 2000-ft rotary test, dr 930 ft.

Young County: R. J. Watson et al's H. H. Jones 1, 1000 ft snl and 850 ft wel TE&L Co. 251, lcn 700-ft cable test.

EAST TEXAS

McLennan County: John C. Rogers et al's Warren Bros. 1, 1200 ft from sw and 1000 ft from se lines of M. Montgomery sur, 2 mi se Hewitt, base Austin 67 ft, dr 810.

SOUTH CENTRAL TEXAS

Bastrop County: A. J. Stormfeltz' Fitzwilliam Est. 1, 660 fr wl 800 fr sl sly portion of tr, J. M. Banks sur, 2250-ft test.

Guadalupe County: United North & South Development Co.'s Mrs. Cora Mackey 1, 660 fr ely/nel 935 fr ely/sel 175-ac tr, James Hodges sur 66, 2 mi sw Day fld, 3 mi e Darst Crk fld, 2700-ft test.

Milam County: R. L. Holcomb et al's J. L. Byrd 3, 330 fr nw&swl 189.1-ac lse, J. J. Acosta Gr, lcn.

Val Verde County: B. E. Wilson's Wilson & Hodge 1, 1139 fr wl 1465 fr nl GC&SF sur 57, blk 5, 19,000-ac lse, mi for 3500-ft test.

Zavala County: David S. Ring-Raymond I. Arsht's J. L. Matthews 2, 330 fr s&wl sect 14, I&GN RR blk 2m, 6000-ac lse, lcn.

LOWER TEXAS COAST

Brooks County: Magnolia's T. S. Proctor 1, 443 fr nl 330 fr wl at ra of lot 5, blk 1, Falfurrias Farm & Garden trs, 194.5-ac lse, 1 mi s La Gloria prod, 10,500-ft test.

SOUTHWEST TEXAS

Webb County: Edwin B. Cox-Jake L. Hamon's Clyde C. Marshall 1, 330 fr ne&sel lot 2, E. J. Foster sbdn on 442.4-ac lse, 3000-ft test.

Zapata County: J. O. Moss' Amelia O. de Vella et al 1, 330 fr se&nel blk 14, sbdn of sh 3, El. Grullo Gr, 2628.78-ac lse, 1500-ft test.

UPPER TEXAS COAST

Chambers County: Randolph C. Reed's Mrs. Effie Pyle et al 1, 2100 ne Humble's Wallis 1, se Mayes fld, 149.5-ac lse, W. H. R. Wallis sur sect 366, blk 20, 10,000-ft test.

Grimes County: Dean A. Bennett's Sealy-Smith Foundation 1, 330 fr n&el 870.4-ac lse, W. H. McIntyre sur sect 40, 4200-ft test.

Jefferson County: A. H. & C. L. Rowan's Beaumont Bldg. & Loan Co. 1, n fld Amelia fld, 38.45-ac unit, C. Williams sur, 10,500-ft test.

Wharton County: Roxoil Drlg. Co.'s Jesse Bartley 1, 330 fr s&el 160-ac tr, se¼ sect 55, ETRR sur, 4 mi n Hillje fld, 7000-ft test.

Salt Dome Oil Corp.'s C. L. Tucker 1, 660 fr s&el 80-ac tr, Mark Weiss sur, sect 24, 7500-ft test.

Dick Schwab's Cates & Kemp 1, 1300 fr nly/nel 384 fr sel 66.42-ac lse, S. F. Austin sur, sw flk Boling fld, 6500-ft test.

CANADA WILDCATS

South Alberta Plains — Irvine: California-Standard's Irvine-Province No. 28-32-11-2, nw lsd 16 32-11-2w4, coordinates 430 ft s 992 ft w, drlg.

South Alberta Plains — Pinhorn: McColl Frontenac & Union Oil 11B-6-2-8, sw lsd 11 6-2-8w4, coordinates 2310 ft s 1650 ft e from section, ru.

South Alberta Plains — Wardlow: British American & California-Standard's B. A. Cal-Wardlow-Province 78-23-22-12, ne lsd 13 23-22-12w4, coordinates 330 ft s 971.7 ft e, ground elevation 2382 ft, ru.

Central Alberta Plains — Kinsella: Northwestern Utilities 18, lsd 10 20-48-11w4, coordinates 150 ft n 150 ft e, lcn, moving in.

Northwestern Utilities' Kinsella 19, lsd 6 32-48-11w4, coordinates 390 ft s 100 ft w, lcn.

Houston Nomads to Meet

Houston Chapter Nomads will meet at the Texas State Hotel, Monday, April 1. C. O. Willson, editor of *The Oil and Gas Journal* will speak on "The Oil Situation of the Middle East."

SQUEAKS from the BULL WHEEL

Life Is So Complicated

When the old maid's little dog, Petunia, got sad, droppy and refused to eat, the lady called in her nephew, a medical student, to diagnose the case.

The young man reported that spring was in the air and the heart of Petunia, and there was nothing wrong with the pooch that association with a boy dog wouldn't cure. He added that the cost was $5.

"Very well," said the lady.

"But," he stammered, "you'll have to give me the $5."

"What!" she exclaimed. "You mean Petunia is the one that must pay?"

The Better Life

Back in the days of quick fortunes and low taxes, an oil man hit it rich and decided to build himself a home that would make Buckingham palace look like a chicken roost.

He built a house of imported marble and costly woods and decorated it with precious paintings and beautiful servant girls. His lawn was a carpet of exquisite flowers shaded by trees that were torn full grown from the sod of distant lands and planted on his acres at enormous expense.

Finished at last, he invited a friend to view the marvel.

The old driller took it all in with popping eyes, then delivered his verdict: "Gosh! Just think what God could do if He had your money."

This Curious World

A woman gets more beautiful with each cocktail—that her escort drinks.

If all the people who sleep in church were placed end to end, they'd be much more comfortable.

A young man's biggest problem is to find a girl attractive enough to please him and dumb enough to marry him.

You can tell she's a photographer's daughter because she sits in a dark room and awaits developments.

Not Fenced In

A little girl was proudly showing her playmate their new home. "This is my daddy's den. Does your daddy have a den?"

"No, he just growls all over the place."

Deceiving Appearance

"Who was that girl I saw you out with last night?"

"I wasn't out. I was just dozing."

Success

"Thirty years ago," said the man who had traveled the world round, seen everything and done everything, "I started out, alone, unaided, without friends, resources or special training, to make the world pay me the living it owes me. My only allies were a dollar bill and a grim determination. "And now, today," he added, throwning out his chest proudly, "I still have that determination—and 50 cents in change."

Home-Loving

"So this is that movie actor's home town. Has he ever been back?"

"Yep. Five times."

"Did his wife ever come with him?"

"Yep. Every time. And five prettier gals you never saw!"

Haughty Hens

A rich man who had bought a ranch was asked if his hens were laying.

"Yes, but of course in my position, they don't have to."

Wooden You Know?

"I don't suppose," said the speaker from the Forestry Service, "that there is a man within sound of my voice who has done a single thing to help conserve our timber resources."

"Wrong," shouted a voice from the rear. "I once shot a woodpecker."

Best Foot Forward

Two hillbilly GIs, on leave in Australia, saw their first kangaroo and set out to catch it. After being paced by the animal for several miles, one halted the other and panted: "No use. That varmint ain't even put his front legs down yet."

Mind in a Whirl

"What's the matter with that guy?" demanded the corner cop of the apartment doorman. "He's been spinning 'round in that revolving door for ten minutes."

"That's our absent-minded tenant on the ninth floor—can't remember whether he's going out or coming in."

Germ-Free

"Sarge, how's the water on this awful island?"

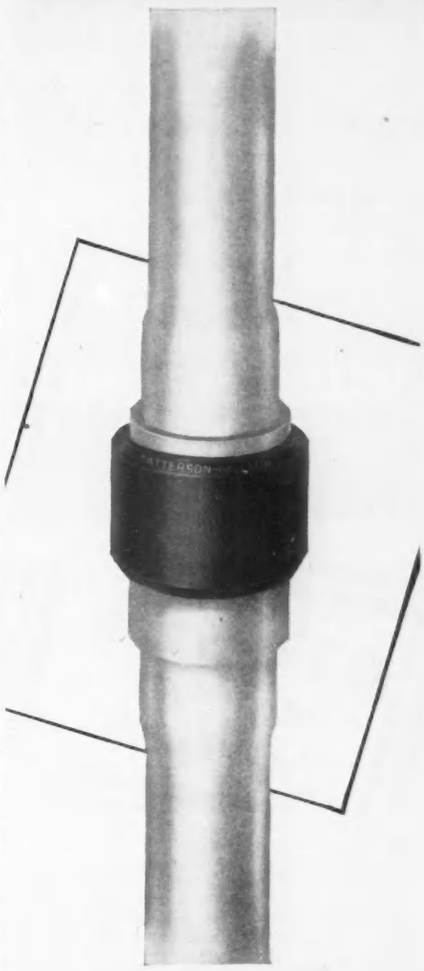
"Well, buddy, first we boil it, then we filter it, and then we drink beer."

Forecast

The atomic bomb had come and laid waste. Throughout the universe, there was no sign of life. No sign save one.

From a cavern in Africa, two small animals emerge to stare in blinking awe at the wreck and ruin. Scratching his head reflectively, the boy monkey turned to his mate. "Well," he says, "I guess we'll have to start all over again."

"Best Bet Yet"



Cut Metal-to-Metal Contact

These oil-proof, insulating, wear-resistant, plastic tubing protectors are an integral part of the tubing collar. Made in all sizes, they prevent the metal-to-metal contact that causes many expensive "wet" jobs in pumping wells. Without this contact, the collars do not wear holes in the casing.

See Composite Catalog

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TWO RIVERS, WISCONSIN

MEN IN THE INDUSTRY NEWS

LAWRENCE O'DONNELL, Shell Oil Company, has been elected chairman of the Houston Chapter of the American Petroleum Institute Division of Production. He succeeds **ROBERT E. BRIDGES,** Humble Oil & Refining Company. Other new officers are **J. E. BAILEY,** Tide Water Associated Oil Company, first vice chairman; **HAROLD DECKER,** Pan American Producing Company, second vice chairman; and **DUDLEY TOWER,** Union Oil Company, secretary-treasurer. Elected to the chapter's advisory board for a two-year period were **J. U. TEAGUE,** Hogg Oil Company; **W. V. VIETTI,** The Texas Company; **L. D. CAIN,** Southern Drilling Company; **L. E. GARFIELD,** Hughes Tool Company; and **AUBRY SCOFFIELD,** Gulf Oil Corporation. Elected to the advisory board to complete one-year terms were **GEORGE CALHOUN,** Shell Oil Company; and **RALPH GRAHAM,** Tennessee Gas & Transmission Company.

Lawrence O'Donnell

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R. H. HARGROVE, vice president and general manager of the United Gas oil and pipe line companies and of the Union Producing Company, is president of a new social culb to be known as the Shreveport Club, whose charter signers are chiefly engaged in the oil and gas industries. **J. B. ATKINS,** head of the Petroleum Dehydrating Company, is vice president of the club.

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ROY BENOIT of Shreveport, attorney for The Ohio Oil Company, suffered a fracture of the left leg and facial cuts and body bruises in an auto accident.

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E. VAN S. LOWRY, dean of Oklahoma oil scouts who works out of Oklahoma City for The Pure Oil Company, is on a special assignment for Pure's land department in Lamar, Colorado. **R. J. MORRIS** is covering the Oklahoma City territory for Pure.

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H. C. WALKER, JR., Shreveport attorney who has been general counsel for the Arkansas Natural Companies for 14 years, has been named president of Arkansas Natural Gas Corporation. Walker succeeds **TEMPLE W. TUTWILER,** who resigned to devote more time to personal affairs.

• • •

GLENN HUGHES, former drilling superintendent in the South Texas area for Sun Oil Company, has been made production superintendent for Sun in the Kansas-Oklahoma area with offices in Tulsa. He succeeds **M. L. BROWN,** promoted to assistant general production superintendent with offices at Dallas.

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DR. T. S. OAKWOOD, professor of organic chemistry at Pennsylvania State College, discussed "Chemical Aspects of the Origin of Petroleum," before the Kansas Geological Society.

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A. CYRIL DALDY, former assistant director of foreign refining, PAW, has joined the public relations staff of Sun Oil Company.

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G. M. PARKER, office manager of Sun Oil Company's Montreal district office, has returned from military service and will resume his former duties. **R. H. AITKEN,** who served as office manager at Montreal, is being transferred to the Philadelphia office.

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ROBERT B. CAMPBELL, consulting geologist, is moving his office to Miami, where he will add to his activities in the oil leasing business a general real estate practice. He will become associated with **L. A. (PAT) CASEY.** Campbell formerly served with Humble Oil & Refining Company in Louisiana, Arkansas and West Texas. Later, in Florida, he became president and geologist of the Peninsular Oil and Refining Company in its oil explorations in the Southeast.

FRANK M. CARPENTER, head of the pipe line department of The Ohio Oil Company for two years, has been appointed assistant secretary of the company to succeed **O. F. MOORE,** elected a vice president. Carpenter has been with Ohio for almost 39 years. He began his career in the Marshall, Ill., office in 1907, performing stenographic and general office work. He began working with The Illinois Pipe Line Company in 1915, the time of its organization and later was transferred to Findley, Ohio. In 1930, he was appointed assistant secretary of the pipe line company, holding this position until that company's dissolution. He has been assistant secretary of The Illinois Pipe Line Company of Texas since it was organized in December, 1942.

• • •

J. D. DAVIES, senior stratigrapher for Shell Oil Company in the Mid-Continent area, has resigned to become associated with **CLINTON ENGSTRAND** in establishing Kansas Sample Log Service.

• • •

BRUCE H. ROBINSON has been made assistant manager, and **RICHARD R. SCHINN,** general superintendent of the production department for General Petroleum Corporation, Los Angeles. Robinson has been with the company since 1925, when he joined the field staff as timekeeper. Shinn was first employed by General Petroleum as a foreman in the Taft field in 1931.

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H. H. VAN AKEN, has been named vice president and general manager of Reserve Oil and Gas Company, San Francisco.

• • •

J. F. BORTHWICK has returned to his job as field man and assistant to **H. M. MORSE,** director of the State Oil & Gas Board of Mississippi, after serving with the Marines in the South Pacific. Borthwick was with the department for two years prior to joining the Marine corps.

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PRENTICE F. BROWN, vice president in charge of West Texas operations for Honolulu Oil Corporation, has announced that the firm has contributed $6666 towards the erection of the Midland Memorial Hospital at Midland, Tex.

• • •

G. GORDON LLOYD has been named general superintendent of Wickwire Spencer Steel Company's Buffalo plant. He succeeds **ALVIN F. FRANZ,** who has been appointed works manager of the Pueblo plant of the Colorado Fuel and Iron Corporation. Lloyd has been general superintendent of Wickwire's Clinton, Mass., plant since 1944. Previously, he was power and fuel engineer for the Carnegie Illinois Steel Corporation in Pittsburgh. In his new position, Lloyd will be in charge of all production at Buffalo open hearth, hot mills and wire departments.

• • •

C. N. SWANSON, former Kansas-Oklahoma district manager for Continental Supply Company with headquarters in Tulsa, has been promoted to director of purchases at Dallas. **R. A. BREWER,** former manager of the Fort Worth district, will succeed Swanson in the Kansas-Oklahoma area.

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ARTHUR J. OLSON, heretofore district sales engineed for Link-Belt Company at Chicago, has been appointed distrcit sales manager at Kansas City, Mo., to succeed **MAX GIFFEY,** who has resigned after 40 years' service with the company. Olson has been in the employ of the company since 1918 at the Pershin Road plant in Chicago. For the past 20 years he has specialized on equipment for the meat packing and allied industries, handling the engineering and sales of elevating, conveying, materials handling and power transmission machinery. Olson will be assisted by **J. ARTHUR TOWNSEND** and **LEROY C. RATHSAM,** district sales engineers.

Arthur J. Olson

MEN IN THE INDUSTRY NEWS

FRITZ TAVES, a member of the California division staff of Schlumberger Well Surveying Corporation since 1935, has been appointed California division manager, succeeding **A. A. PERRIBINOSOFF.** Taves, until recently a captain in the United States Naval Reserve, served four years with the Navy in various capacities, including the post of commanding officer at the Elk Hills Naval Reserve in California.

Fritz Taves

• • •

KING D. BOYD, for three years an officer in the Navy and at one time officer-in-charge of the Bureau of Ships' Salvage Department at Pearl Harbor, has been appointed district manager for the Detroit Diesel Engine Division of General Motors Corporation, Petroleum Industry Sales, with headquarters in Houston, and covering the Gulf Coast area of Texas, Louisiana and Mississippi. Prior to the war, he was an instructor in engineering at the University of Oklahoma. He was district sales engineer for Reed Roller Bearing Company in Oklahoma City, and at one time was a mechanical engineer for the government in Washington and in the Panama Canal Zone. He was also associated with Emerson Electric Company as assistant chief design checker and head of the standards department.

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CLYDE A. KING, JR., and **EDWARD R. LUNDBERG,** both of Tulsa, have organized the Petroleum Supply Corporation and will represent a number of well known firms in selling oil field equipment and supplies. King, recently discharged from the Navy, was formerly associated with Hinderliter Tool Company as purchasing agent, and Lundberg was employed by T. W. Simmons Oil Company of California.

• • •

LT. JAMES M. CLEARY has ended three years of service with the Navy and has resumed his position in the Tulsa sales department of Texoma Supply Company. A graduate of the University of Oklahoma, Cleary enlisted in May, 1942, and spent two years in the Aleutians.

GEORGE B. CUSHING has been named manager of sales promotion for The National Supply Company. Cushing, for the past 17 years sales promotion manager for A. M. Byers Company, will direct the sales promotion activities of National Supply, including the Spang-Chalfant, Superior Engine and oil field machinery and equipment divisions. These activities will inculde the advertising and market development programs of the company.

George B. Cushing

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WALTER F. SPOERL has been named general sales manager of the mechanical goods division of United States Rubber Company, succeeding **HERMAN A. EVERLIEN,** who died February 21 after 43 years with the company. Spoerl began his carrer 38 years ago as a clerk in the company's sales offices in Chicago. He became merchandise manager of the mechanical goods division in 1944, the position he held at the time of his new appointment.

• • •

W. R. MEEKS and **W. J. SMITH** have organized the Survey Service Company with offices in Tulsa, and will specialize in repairing and servicing various survey instruments. The service will not, however, include work on gravimetric instruments. Meeks has been associated with Seismograph Service Corporation for ten years and Smith has had several years experience in the repair of technical instruments.

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MORVIN THOMAS has opened a sales and engineering service office in Tulsa as representative of the Cook Electric Company of Chicago, which features electrical equipment for the oil industry, a new type heat exchanger and new type expansion joint. He also represents the Federal Electric Company of Chicago, which features plastic coatings and plastic shot hole casings.

Deaths

N. W. SHIARELLA, 48, Owensboro, Ky., independent operator who has been prominent in the development of the oil resources of Illinois, Indiana and Kentucky, died of a heart attack at his home in Owensboro March 15. Shiarella was a member of the firm of Miller and Shiarella and was one of the organizers of the Kentucky Oil Men's Association. He was one of the Charter members of the IPAA, served on the industry's advisory committee under PAW, and represented his state on the Interstate Oil Compact Commission.

N. W. Shiarella

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HENRY J. GARDEN, 49, independent oil operator of Hutchinson, Kans., died March 14 following a heart attack in Kansas City. He was a native of Ohio.

ROGER A. HOWE, 55, vice president and general manager of McKamie Gas Cleaning Company, died at Magnolia, Ark., March 11. He was a pioneer in the movement to desulphurize natural gas in southwest Arkansas, and was made general manager of the McKamie plant, subsidiary of Standard Oil Company (N. J.), when the installation was completed in 1942.

• • •

D. G. HISEY, 49, scout for Gulf Oil Corporation in southern Oklahoma, died of a heart attack at Fort Worth, March 15. He was returning to his home at Ardmore after treatment in a Temple, Tex., hospital. Hisey joined Gulf 26 years ago and went to Ardmore about 21 years ago as one of the first scouts of a major company to cover southern Oklahoma.

• • •

DION L. JOHNSON, 65, Fort Worth oil operator and electric power executive, died March 16. He was associated with **E. L. ORR** of Fort Worth in the oil business, and has served as an official of West Texas and Panhandle power companies.

• • •

FRED C. REED, 61, pumper for The Texas Company on a lease east of Sapulpa, Okla., for 23 years, died at his home in Sapulpa March 16 of a heart attack.

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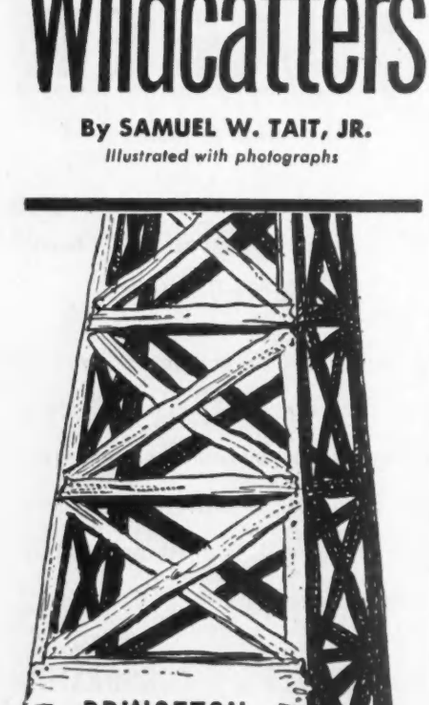

Oil Bibliography

The combined oil bibliographies of Dr. E. DeGolyer (which involves some 12,000 items) and the Petroleum Engineering Department of A. & M. College of Texas, plus a complete bibliography of the air-gas lift furnished by S. F. Shaw have been included in the 730-page Agricultural & Mechanical College of Texas' Bulletin Number 83, entitled "Bibliography On The Petroleum Industry" by Dr. E. DeGolyer, consulting geologist and Harold Vance, head of A. & M.'s Petroleum Engineering Department.

The references have been arranged under some 900 subjects, using the decimal system of indexing devised by Professor L. C. Uren of the University of California. In some cases, the subject headings have been arranged in alphabetical order under a main subject heading. The table of contents lists ten major subdivisions of the bibliography and an alphabetical subject index is included at the end of the bulletin. The references under each subject heading have been arranged in chronological order starting with the oldest reference.

Under the major subdivisions may be found such headings as (1) General Data on Petroleum and Related Industries, (2) Physical and Chemical Properties of Petroleum, Examination, Testing and Sampling, and (3) Economics of the Petroleum Industry. References listed under all subject headings have been taken from any and all possible sources dealing with the oil industry directly or indirectly. Both foreign and domestic books, magazines, technical papers, abstracts, reports and various society findings have been reference sources of the authors.

Chain Link Fence

A chain link fence erection manual, "How to Erect Chain Link Fence," has been published by Wickwire Spencer Steel Company. As an aid to contractors, fence superintendents and other responsible for the installation and maintenance of chain link fence, this new manual is unique in the field.

It is a complete instruction guide covering all points in the erection of this type steel fence and is generously illustrated with clear, understandable drawings which may be used as a blue print or plans in actual practice.

Copies are available without charge from Wickwire Spencer Steel Company, 500 Fifth Avenue, New York 18.

Packaging

"Making the Most of Packaging Material" contains a survey of war-born technical developments and methods, their possibilities for peace-time packaging, and lists criteria for checking the protective qualities of packaging materials.

This booklet outlines the packaging possibilities of combining various types of flexible materials, and answers specific questions such as the applicability of packing for consumer and export products. It describes a new method of impregnating wax paper and includes a report on peace-time uses of V and W boxes.

Priced at 75 cents, this booklet can be obtained from the American Management Association, 330 West 42nd Street, New York 18.

Labor Grievances

"How to Handle Labor Grievances" by Dr. John A. Lapp, a 294-page book, is a practical treatment of the problem based on actual experience and the review of hundreds of cases in the field of labor-management relations.

Disagreements between employers and employes in industry and commerce are endless in variety. All too often careless treatment of them results in serious disputes later. Yet in most cases either a solution to the grievance is already available, or a practical method for arriving at a solution is ready for application. An appendix contains 22 grievance forms used by leading corporations.

The 5½-inch by 8-inch bound book is available for $4.00 from the National Foremen's Institute, Inc., Box B, Deep River, Conn.

PAW

The Department of Information of The American Petroleum Institute has just published a booklet, "A Valedictory," by Ralph K. Davies, former deputy Petroleum Administrator for War. The book contains the address delivered by Davies before the 25 Annual Meeting and Victory Jubilee of the American Petroleum Institute in Chicago last year.

It is a resume of the PAW and its operation during time of war and what was accomplished through its efforts. It is a tribute to the petroleum industry at large for its all-out effort. A letter from the Army-Navy Petroleum Board is quoted in full to that respect and in part its reads, "Because of the resourcefulness, untiring and unceasing efforts, and outstanding accomplishments of the Petroleum Administration for War and the petroleum industry, not a single operation was delayed or impeded because of a lack of petroleum produts."

This booklet may be obtained from the Department of Information of the American Petroleum Institute, 50 West 50th Street, New York 20.

Industrial Design

J. Gordon Lippincott & Company, New York and Chicago firm of industrial designers has prepared a bound portfolio of booklets and folders on the varied aspects and applications of industrial design.

The literature offered includes examples of designer-client mutual publicity, outlines of industrial design as a profession, pamphlets on Packaging, Interiors, Lighting, Products Development, Style Obsolescence, Emotion vs. Intellect in Product Merchandising, etc., and a folio on the costs of Industrial Design. Copies available upon request from J. Gordon Lippincott & Company, 500 Fifth Avenue, New York 18.

MANUFACTURERS' NOTES

Johnson-Fagg Engineering Firm Is Formed in Tulsa

Leo Fagg

Douglas Johnson

The Johnson-Fagg Engineering Company with offices in Tulsa has been organized by Douglas Johnson and Leo Fagg after many years of intimate association in the field engineering department of the S. M. Jones Company. The new firm will devote its services to dynamometer well studies and engineering problems related to the operation of pumping wells.

Johnson joined S. M. Jones in 1935 as manager of the field engineering department. Fagg joined the company in 1937 and has been incharge of field work in many areas of the Mid-Continent and Gulf Coast.

Houston Company Is Licensed To Offer Penetron Service

The Penetron Service Company, 2427½ University Boulevard, Houston, has been licensed by Engineering Laboratories, Inc. of Tulsa to offer to the petroleum industry a new service in the field of detecting presence of internal pipe corrosion or reduction in wall thickness of pipes or vessels.

The organization has been formed by three graduate petroleum engineers, Philip H. Lipstate, University of Texas, class of 1940, Leonard A. Kratzer, University of Oklahoma, 1940, and Felix B. Gordon, University of Oklahoma, 1938.

The penetron, developed by the Texaco Development Company, measures the thickness of materials through the use of scattered gamma rays. Immediate application has been found in the condensate fields, refineries, gasoline plants and cycling plants. Reduction in wall thickness of field lines, meter runs and some christmas tree connections is easily detected from the outside wall in a matter of seconds.

Air Transport Firm Offers Service to Oil Industry

Eagle Air Transport, with headquarters at Municipal Airport, Houston, began operations on March 1 as a non-scheduled air service especially developed for the oil industry where speed is a prime factor in the moving of men and equipment. Especially equipped for this service is a C-47 purchased from the government by John H. Eagle, manager of the company and a pilot recently discharged as an Army Air Corps major after more than three years of service.

The plane is licensed to carry 27 men, including the crew, or 6000 pounds of cargo. It is especially arranged for a combination of oil field equipment and the crew to operate the equipment, or can be converted immediately to haul all passengers or all cargo. Length of the ship allows for transporting 30-foot joints of pipe, and special lock-down arrangements for pipe and tools are used.

Eagle Air Transport offers overnight service between Houston and Los Angeles, with stops at Odessa, Tex., and Tucson, Ariz. Service is also available to Mexico, Central and South America.

Telegrams to Be Transmitted By Radio in Next Few Years

Within the next few years, telegrams between major cities will travel by radio beam instead of by wire when radio relays are used instead of the present trunk pole lines, it was stated by C. S. Johnson, superintendent of the Western Union Telegraph Company.

This system will improve the quality, dependability, and speed of service to the public as well as reduce interruptions resulting from storms, falling trees and electrical disturbances. The first step in the program is now under way with the establishment of the New York-Pittsburgh-Washington triangle which will provide two-way radio communication between these cities. Each of these super-high frequency beams will be used to provide circuits for all available telegraph traffic as well as for other purposes, Johnson said.

Chicago Products of Tomorrow Expoistion Is Postponed

The Products of Tomorrow Exposition scheduled for the Chicago Coliseum April 27 has been indefinitely postponed due to the uncertainty of products and delivery schedules, it was announced by Marcus W. Hinson, general manager for the exposition.

The exposition will be the first of a projected annual series patterned along the lines of the Leipzig Fair of prewar Europe.

Allegheny Ludlum Announces Stainless Steel Price Hike

Allegheny Ludlum Steel Corporation is increasing immediately the price of stainless steel by 8.2 percent. This increase is equivalent to that granted to steel producers in the average realized price of all steel products as recently announced by OPA.

Ceiling prices on stainless steel were suspended in October, 1945, but this is the first price advance made on this product to offset the large increases in material and labor costs affecting stainless which have occurred in recent years, culminating in the 18½-cent increase in wages just granted, a company spokesman said.

Refresher Course Is Given Detroit Diesel Firm Men

The Detroit Diesel Engine Division of General Motors Corporation recently completed a five-day "refresher course" for the men who will be responsible for the sales and servicing of the GM series 71 Diesel engines abroad. Company officials described the 71-series engine, its varied application, distribution and potential markets.

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